THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

MAY 20 1929

LAND ECONOMICS INSTITUTE for RESEARCH in PUBLIC UTILITIES
"UNDER ALL" "THIS LAND"

MINIMUM COSTS FOR LOW-RENTAL HOUSING
ALEXANDER M. BING

RATE-MAKING FUNCTION OF UTILITY MANAGEMENT
F. A. NEWTON

RAILWAY AIR RIGHTS DEVELOPMENTS AND MOVEMENTS OF LOCAL LAND VALUES
WILLIAM D. PENCE

A CASE STUDY OF PUBLIC OWNERSHIP
F. A. STATEN

A DEVELOPER'S VIEW OF DEED RESTRICTIONS
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FINANCING FLOOD CONTROL MEASURES
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THE "FREE-LOT" SUBDIVIDER
H. MORTON BODFISH

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MINIMUM COSTS FOR LOW-RENTAL APARTMENTS

By ALEXANDER M. BING

THE widespread misapprehension as to the cost of tenement construction and operation makes it seem desirable to set forth the facts as they have appeared to the writer both from his own experience and from a study and analysis of the work of others in model tenement construction.

It has frequently been pointed out that practically all the efforts of philanthropic or semi-philanthropic organizations and individuals to build improved tenements have failed to reach the poorest members of the community, the ones who need it most. The reasons for this condition will become apparent from a study of the figures set forth below. In considering housing costs, it will be useful to divide the elements of expense into four divisions:

I. Capital Costs and Interest Thereon, a further subdivision of which can usefully be made as follows:
   a. Cost of land, including the installation of public utilities, paving and curbing, sewers, water, gas, electricity and sidewalks. (In New York and many other jurisdictions no direct charge is made for the installation of water, gas and electricity.)
   b. Cost of construction of building.
   c. Carrying charges on capital invested in land and buildings during construction period (interest, taxes, etc.); under this classification it is also convenient to add architects' fees and sundries.

   After the determination of the sum of these items, they become translated into yearly expense by the calculation of the necessary interest return.

II. Municipal Taxes.

III. Other Current Expenses, which consist of the following items:
   a. Cost of management and rent collection.
   b. Wages of janitor, fireman, superintendent, etc.
   c. Water rates.
   d. Insurance (fire, liability, workmen's compensation, rent).

e. Fuel.
f. Electricity.
g. Repairs and decorating.
h. Lost rent.
i. Sundries and contingencies.

IV. Depreciation.

In order that any housing project shall earn a moderate return it will be necessary to charge each of the occupants in the building his share of the sum of the foregoing. An accurate determination of housing costs, however, is difficult because of the variation in practically all the items in question, resulting from such factors as location, building costs at the time of construction, rate of interest which must be earned on capital investment, the amount of repairs which the owner of the building desires or is compelled to make, the amount lost because of vacancies, etc. A large variation may also occur in the item of taxes, arising out of the location of the housing project and the eccentricities of the taxing authority. Practically each one of the items in question is thus susceptible of variation. This being the case, the reader may wonder how it is possible to give any accurate forecast as to rentals that will have to be charged in any given case, or to establish any definite minimum. It will be seen, however, when the figures are studied, that a statement as to approximate minimum housing costs is possible partly because a correlation exists between certain factors. For example, the figures set forth below show that the reduction of certain important elements of cost is likely to be accompanied by an increase in certain other items. The figures show further that it is possible to let tenement rooms at almost as low a rent in many parts of Manhattan Island in New York City, where land is fairly expensive, as in country districts where land costs practically nothing, because this saving is offset in part by added cost of other items.

Some of the variables entering into our problem consist of room sizes, building height and intensity of plot coverage. Obviously the cost of land per room will vary in accordance with changes in these factors. For the purpose of simplicity, therefore, it will be desirable to make certain assumptions on which to base our calculations; the effect of variations from the assumed state of facts will be indicated.

We will assume that the housing enterprise under consideration consists of a building or group of buildings containing about 1000 rooms; that the average size of apartments is 3½ rooms, and the average size of rooms is 110 sq. ft. (by this is meant the number of square feet of clear space within the four walls of the room); that the building is located in New York City and covers 55% of the land and that it is built to a height of five stories. (Such a building need not be fireproof excepting the construction of the first floor, together with stairs and public halls.) The building is assumed to contain a bath in each apartment which is not counted as a room, the floor of which is tiled, and a kitchen which counts as a room. On these and such other assumptions as will be indicated in detail in the following paragraphs, the results will be based.

I. Capital Costs and Interest Thereon

Cost of Land. Under the assumptions above set forth, the building in question will contain about 40 rooms for each lot (25' x 100') on which it is built. If the land costs $8,000 per lot, the land cost per room would be $200. For every $1000 of added or decreased land cost, the sum of $25 would have to be added to or subtracted from this basic cost. Since there is very little land on Man-

hattan Island costing less than $6 per sq. ft. or $15,000 per lot, this figure will be used as a basis for calculation. At this price level, the cost of land per room is $375.

Cost of Construction of Building. With building prices as they exist at the present time, and making the assumptions above set forth, the minimum room cost will be about $860 for the bare cost of building. One of the causes of confusion in reference to building costs arises from the use which has been made of cubic-foot costs. It is customary in building and real estate circles to estimate building costs on a cubic-foot basis. This forms a convenient method for arriving at a rough estimate, but it will be found that cubic-foot costs vary not only in accordance with the character of the building and the quality of workmanship but also in accordance with the crowdedness of the plan and the size of the rooms. Great care must be observed in the use of this method of estimating to allow for these variations. The cubic cost of a building containing very small rooms will be found to be much higher than a similar building with large rooms. Every modern apartment contains a bath and a kitchen, the two most expensive parts of the building, and it must bear its share of staircase, fire escape and other building expense as well. After studying the costs of a considerable number of buildings, the writer has concluded that $860 per room is the lowest price at which any modern apartment of the type above described can be built with building costs at their present level (this is the equivalent of 45 cents per cubic foot). Very few tenements have been built in the last five years in the New York area at so low a cost per room, and rigid economy is needed to reach this minimum.

Carrying Charges During Construction. With the above assumptions and assuming further a reasonably rapid completion of the building and figuring interest during construction at the rate of 6% per annum, the lowest rate at which it is possible to borrow on building loan, the item of carrying charges, architects' fees, etc., will amount to about $75 per room. The total capital costs on each room of our assumed building, therefore, will be approximately $935 as a minimum cost of building and carrying charges, plus $375 for land, or a total cost of $1,310 per room.

To convert this capital cost into an annual expense, we must calculate the interest return which must be earned thereon. It will be necessary to figure separately the interest charge on that portion of the investment which is represented by a mortgage, and the interest charge on the balance of the investment, which is known as the equity. Obviously in both of these items there is a substantial margin of variation, depending upon the general condition of the money market and upon the interest requirements of the mortgagee and the owner of the equity. As a general rule on the Island of Manhattan, from 50% to 60% of the value of a tenement can be borrowed on first mortgage at an interest rate which varies from 5% to 6% depending upon the supply of capital available for this purpose. The prevailing rate for this type of mortgage has been 5½%, with a possible rate of 5% when money is very plentiful and 6% when money is scarce. At the present time the prevailing rate is 6%.

A somewhat abnormal condition has been created in connection with buildings erected under the provisions of the New York State Housing Law of 1926, wherein a maximum mortgage interest rate is fixed at 5% for buildings erected under the provisions of that law. At the time of the passage of the law, the rep-

resentatives of the Metropolitan Life Insurance Company assured the New York Legislature of their willingness to lend very large sums at this rate of interest upon projects developed under the law. Two or three loans have been made by the Metropolitan, on projects coming within this category, at the rate of 5%. It appears doubtful, however, whether this institution will continue this policy indefinitely if money rates remain high, and the writer does not know any other institution that would lend at this rate at the present time. Furthermore, even this Company has confined its 5% tenement loans to projects coming within the new Housing Law.

Therefore, the assumption of a 5½% mortgage interest rate is necessary, bearing in mind the variations that will be effected by an increase or decrease of ½%. Assuming then a 60% mortgage at 5½% interest together with an annual charge of 6% on the equity, the total annual interest expense per room would be $74.67. In most cases, the owner of the equity will be a corporation. Its earnings will, therefore, be subject to a Federal Income Tax of 12½%. In order, therefore, to be able to pay dividends of 6%, the owning company will have to earn about 6.8%. The Federal Income Tax, in this case, would amount to about $4.20 per room per annum which amount, however, has not been included in this estimate. Each increase or reduction of ½% in mortgage interest rate will involve a difference of $3.93 per room per annum. Every such difference in interest on equity will involve a difference of $2.62 per room per annum, to which it might be necessary to add for Federal Income Tax.

II. Municipal Taxes

The tax rate in New York City has varied from 2.73, in the Borough of Manhattan, to 2.76 in the Borough of Queens. The Law directs the tax officials to assess all real estate at 100% of its market value. We know, however, that in practice every piece of property is not assessed at the full 100%, although some properties are assessed in excess of this amount. The average, however, for this class of property is about 80%. The assumption, therefore, of a tax rate of about 2.15% on the total cost of land and building, seems reasonable bearing in mind that this assumed item of expense may be increased or lessened, depending upon whether the property has been assessed for more or less than 80% of its original cost. A variation of the tax rate is also a possibility; in fact a slightly lower rate has been announced for the coming year. This reduction of rate has, however, been accompanied by very general increases of assessment. The estimate of 2.15% on full valuation can therefore be allowed to stand and, furthermore, it seems fairly representative of taxes in other jurisdictions. This item per room per annum is approximately $28.17.

III. Other Current Expenses.

Cost of Management and Rent Collection. This is not an important item, and can be set down at about 3% of the rent as a minimum. Some housing corporations charge as much as 5% for this service. We may therefore take 3% as a low minimum, or about $4.80 per room per annum.

Wages of Janitor, Fireman, Superintendent, etc. Variations in this item will depend upon the amount of service, cleaning, oversight, etc., which it is desired to furnish. Variations will also depend upon the size of the operation. In the case we have assumed of a group of buildings, containing 1000 rooms, wages will amount to about $8 per room per

annum. In some organizations a force of men is employed in painting and building maintenance, but generally this work is done by contractors. Wages expended for redecorations or larger repairs are not included in the $8 estimate. Such expense should be allocated to repairs and decorating.

Water Rates. In New York City this is not a large item, and will amount to about $2 per room per annum.

Insurance. Fire insurance is not costly and is reasonably constant at about 85 cents per room per annum. On the other hand, public liability will vary greatly, depending upon the location of the building, character of tenancy, etc. The premium will not be figured by the insurance company on the basis of rooms, but rather on area and height of buildings, but reducing the premium to a room basis, this item will vary from a minimum of about $1 per room per year, under the most favorable conditions, to $4 for less desirable risks. For purposes of present calculation an amount can be taken for liability insurance midway between the two extremes. Workmen's compensation is based upon payroll and will amount to 15 cents per room per annum. Rent insurance would add 20 cents, making a total for all kinds of insurance of about $3.70 per room per annum.

Fuel. The cost of fuel will vary to a considerable degree with size of operation. In the case under discussion it would be approximately $7.50 per room per annum.

Electricity. This item refers to the illumination of public places, such as the entrance hall, stairs and basement, and would amount to approximately $1.20 per room per annum.

Repairs and Decorating. This is an item of large variation. During the first few years of the life of a building repairs should be small, although there might be considerable redecoration, resulting from settlement cracks, etc. The amount of change in tenancy is another factor determining both repair and redecoration costs. Reasonableness of the rents, which maintains a steady demand for the apartments and enables the landlord to refuse unreasonable requests, is also a factor affecting the amount of decorating required. Assuming this reasonableness in rent charges, the total cost of repairs and decorating throughout the building necessary to keep it in reasonably good condition would be $10 per room per annum.

Lost Rent. This is another variable item. Before the war 10% was the customary amount allowed for vacancies by commercial real estate companies when figuring the probable income of a building. There are many tenements in the city today in which vacancies have averaged much higher in the last few years. On the other hand, where it is possible to let below the market price in buildings like those of the Metropolitan Life Insurance Company, which enjoy the benefit of tax exemption and other advantages, the item of lost rent is practically eliminated. The amount of variation to which this item is susceptible makes it difficult to estimate. An allowance of $6 per room per annum is suggested; this is equivalent to 4% of a rent of $12.50 per month.

Sundries and Contingencies. This item is also subject to a good deal of variation. For an apartment house on Manhattan Island an allowance of $2 would be a minimum. On the other hand, if the apartment house were situated on the outskirts of the city or in the country, the cost of the upkeep of gardens, which would be regarded as a desirable, if not a necessary, feature of apartments in such a location, would have to be in-

cluded. This would involve an additional amount of at least $2 which, however, is not included in this estimate.

IV. Depreciation

Here again is an item upon which reasonable people can differ. Two elements are involved: (1) an actual lessening of the physical value of the building and (2) obsolescence, by which is meant changes in current practice of design, materials and construction, which lessen the rental value of buildings as they become older. The amount which should be reasonably allowed for this item is a matter of frequent discussion between real estate companies and income tax officials, and a practice has become fairly well crystallized whereby an allowance of approximately 2½% upon the original cost of buildings of the type under discussion is considered proper. Inasmuch as we assumed a building cost of $935 per room, an allowance of 2½% would involve an annual charge of $23.25 per room. But this may be regarded as excessively conservative when minimum rather than commercially safe rentals are the aim. For the purpose of this discussion a charge of $12 per room per annum will therefore be used, although so moderate an amount might not be sanctioned by conservative business practice.

The sum of the items enumerated under the heading of Maintenance Charges gives a total of $43.20 per room per annum and a summary of the annual expense per room is as follows:

Interest charges on capital cost	$74.67
Taxes (municipal)	28.17
Maintenance charges	43.20
Depreciation	12.00
Total	$158.04

Thus, in order to earn 6% on capital investment, a minimum rental of approximately $13.20 per room per month will have to be charged in the case under discussion. This figure is a minimum for buildings located on Manhattan Island. Furthermore, no adequate allowance is made either for contingencies or for profits of any kind. In fact, this is a rate of return at which it is difficult to induce capital investment. Before discussing the implications of such minimum rent, it will be desirable to consider whether or not buildings could be built to rent at a smaller sum, by the use of less expensive land, or other economies; and also to what extent such measures could be expected to reduce the rent. Some of the items heretofore enumerated are irreducible minimums but some of them might possibly be decreased under special circumstances.

V. Possible Cost Reductions in Order to Lower Rents

Cost of Construction. We have assumed a coverage of 55% of the land, inasmuch as this amount of coverage has come to be regarded by most experts as desirable. The Tenement House Law of New York City, however, as well as many other jurisdictions, permits a coverage of 90% for corner lots, and 70% for inside lots. It is possible, legally, to cover about 75% of a plot of land located on a corner but including a number of inside lots. This greater coverage would reduce the cost of land per room and of taxes thereon. In the case which we have assumed, of 55% coverage and a land cost of $15,000 per lot, the annual charge per room, chargeable to land cost, has been figured at about $29.45. By intensifying the coverage to 75%, this would be reduced to $21.40, a 27% reduction. The possible saving by greater intensity of coverage amounts therefore

to $7.85 per annum or 65 cents per month. This, however, involves a more intensive use of land than is considered desirable, and produces a building which may not maintain its appeal to the renting public, thus possibly involving a larger percentage of vacancies, if not in the first few years, at least a little later. In other words, this more intensive coverage might increase the rather small allowances heretofore made for vacancies and for depreciation.

The same considerations apply with even greater force to an increase in the height of the building from five to six stories. Such an increase in height on $15,000 land would result in a theoretical decrease of approximately 20% on that portion of the rental charge attributed to the cost of land. People are disinclined, however, to climb to the sixth floor and this disinclination has increased very much during the last few years, and will probably continue to discourage the renting of sixth-floor apartments if any other accommodations are available. Therefore, to figure on buildings of this height without allowing a more substantial sum for depreciation seems unwise, and such an allowance would more than offset the saving. If, however, the reader wishes to figure on the full saving for these two items without increasing the allowances for depreciation or lost rent, a total reduction can be made of $11.38 per year or 94 cents per room per month on land costing $15,000 per lot by building the maximum intensity and height permitted by law.

A further saving is possible if buildings are built on land costing less than $15,000 per lot. Inasmuch, however, as large plots are no longer available on Manhattan Island at less than $15,000 per lot, any extensive building project would have to be located in one of the other Boroughs, where land can be bought in large tracts at lower prices.

Land is available in settled sections of Brooklyn, Queens and the Bronx for the sum of from $4,000 to $20,000 per 25 ft. lots, including in this figure the installation of all utilities, and in the Borough of Richmond for somewhat less. A reduction of land cost to $4,000 per lot will reduce that portion of the rental charge attributable to interest on the cost of land (based on a 55% coverage) from $21.38 to $5.70 per room per year, a saving of $15.68 per room per year or about $1.30 per room per month. It may also produce a reduction in taxes of $5.91 per room per year, making a total possible saving of $21.59, or a little less than $2 per room per month. This saving would not be materially increased by adding to the intensity of land use above 55%. On land at this cost level and figuring on so low an interest return, the effect of increasing the land coverage would be negligible.

It will be found, however, that increases in other items will offset a part of this saving. A 6% mortgage interest rate will increase rents $3.11 per room per annum. A higher allowance for lost rent, repairs and garden upkeep might involve increases of $6 to $10 per room per annum. The saving by the practical elimination of the item of land cost would therefore be between $10 and $18 per room per annum, or between 85 cents and $1.50 per room per month.

In estimating the minimum at which apartments can be rented in suburban areas, the cost of land in these places is a negligible item in a building project of the size and character which we are discussing, that is, five-story buildings covering 55% of the land with rooms averaging as little as 110 square feet. We have assumed in New York City as part of the saving that would result from build-

ing on cheap land a reduction of taxes as well as of interest. In suburban areas the taxes might be higher for such apartments than in New York City; but it is difficult to make an accurate estimate of what allowance would be necessary for this item.

In the opinion of the writer the "Cost of Construction" has been assumed at an absolutely minimum figure, and the cost of the building would be unaffected by increasing the intensity of land coverage. Increasing the height to six stories might effect a slight but negligible saving. Furthermore, the tendency in New York City, as elsewhere, is to require fireproof construction for buildings over five stories in height. Such a requirement would make economy by greater height absolutely out of the question. We are assuming a building of simple, inexpensive construction; to be sure, the floors of bathrooms would be tiled, but this is not an item of great expense, and any decent standard of sanitation would make this obligatory. We are assuming a minimum room size, both for decency and for purposes of ready and steady rental. In fact, there is a point at which it is no longer economy to reduce room sizes and an average size of 110 sq. ft. approximates this point.

It is very doubtful whether the construction cost per room would be lower in any of the outlying Boroughs or in suburban areas in the New York region than estimated in the City proper. While the wage rate in many outlying sections is somewhat lower than in the City of New York, the efficiency of the men is also somewhat less, and the supply of aggressive and efficient sub-contractors is not as great in these places as in the city itself. These factors offset the economies which would otherwise result from doing work in suburban areas. It can be safely stated that no substantial savings can be made in the "Cost of Building" item.

Taxes. An obvious saving under this heading would accrue from tax exemption; otherwise, the amount that has been figured for taxes would appear to be a minimum and not susceptible of reduction. In this connection, the interesting fact to be considered is that taxes paid by the occupants of many tenements in a city like New York are not sufficient to pay for schools, hospitals and other municipal services. These services are made possible by the very large contribution to the city's income from office buildings, industrial enterprises and homes of the very wealthy, for these buildings pay in taxes a sum vastly in excess of the direct charge which they make upon the community. Such a condition is perfectly proper and the writer does not wish to criticize it, but rather to point out that the removal of a building operation to land outside of a large city is likely to involve an increase rather than a decrease in taxes, if the community in which the apartments are to be located is to be provided with good schools, hospitals, parks and other similar services.

Maintenance Charges. The suggestion has already been made that these charges can only be reduced through an impairment of the service to be rendered, with the exception of the item of 4% lost rent, which amounts to approximately $6 per room per annum, or 50 cents per room per month. This can be reduced wherever the rental of desirable apartments is considerably below the market price; otherwise a larger allowance may have to be made.

VI. Implications of Such Minimum Rents

From the foregoing facts, then, the assumed minimum of $13.20 per room

per month is susceptible of certain reductions through change of location, etc. The savings are produced by lessening the land cost, either through more intensive use or by building on cheaper land. Taking the maximum saving from this source to be $1.50 per room per month together with a further saving of 50 cents per room per month secured by eliminating the item of lost rent, we arrive at a figure of $11.20 as the lowest amount for which it is possible to rent apartments at building costs prevailing today.

This rental presupposes a very large and economically conducted operation with a limitation of interest return on equity to 6%, a total elimination of lost rent, small rooms with 55% coverage on very cheap land, or a 75% coverage on land costing $15,000 per lot and many items reduced to a point which does not allow a margin of safety. It is a minimum estimate below which rentals could not be safely fixed if a 6% interest return were expected, but it may be a useful calculation to show the itemized costs of any housing enterprise with minimum estimates in each case. To provide a reasonable margin of safety, a rental of between $13 and $14 would have to be charged in a group of buildings similar to those studied above.

Another element, to which consideration should be given, is the question of possible reduction of house rents by means of the rental of a portion of the ground floor for stores. In the opinion of the writer no appreciable reduction of rent can be expected from this source in the average case. As a rule, if a location is valuable for stores, this fact will be reflected in the cost of the land and the interest on this surplus cost will absorb most, if not all, of the surplus rent. It is true, however, that, if the enterprise is located on cheap land and if it contains the number of rooms assumed in this study, a certain increment will arise from store rentals. This amount is difficult to estimate in advance, and in the opinion of the writer a conservative figure would not include a reduction of rent from this source.

Any building operation is a somewhat hazardous proceeding, in which many things can happen which will increase the cost. As a rule, buildings cost more than originally estimated. The figures given above are minimum figures; and more than likely in any given enterprise these estimated costs would be exceeded. The estimates are not intended as safe and conservative, but rather as minimums, to indicate the lowest rentals that can be obtained. For this reason, the writer believes that, if the location of the housing enterprise permits of stores on the ground floor, any excess rental derived from the stores over and above that which would have been received from apartments occupying the same space, should be regarded as a margin of safety. The amount of this excess will depend upon how valuable the stores proved to be, and how much it was necessary to pay for the land in excess of the amount assumed in this study.

If the costs of existing housing enterprises built within recent years be examined, it will be found that, after making allowances for difference of conditions, the cost of building and operating these enterprises substantiates the conclusions set forth above. Consideration of commercial buildings will be unnecessary as these will be found to entail very much higher rents, resulting from a desire on the part of the builders and owners to earn a substantially higher return than 6%, and also from the fact that these operations have usually been carried on at greater cost than our assumed enterprise, containing larger rooms, etc.

VII. Comparative Costs Achieved in a Few Low-Rental Developments

The housing developments, which are useful to consider, are those conducted on a semi-philanthropic basis. A large number of tenements have been built and very successfully operated by the City and Suburban Homes Company, and rented so as to secure a limited return on the capital invested. Inasmuch as practically all of the work of this Company was done 20 years or more ago, these buildings will not serve as any basis for comparison as to capital costs. The most recent building work of this Company was a group of apartments in Brooklyn, built at a considerably higher cost than our hypothetical case and rented at between $15 and $16 per room per month.

A conspicuous and highly successful case of semi-philanthropic housing is furnished by the two groups of buildings begun in 1922 by the Metropolitan Life Insurance Company. These consisted of a number of buildings erected in the Steinway section of Long Island City and another group in the Thompson Hill section, containing in all 9,148 rooms divided into 2,125 apartments. These enterprises were intended by the Metropolitan Life Insurance Company to alleviate the housing shortage which followed the war. The purpose of the Company was to earn 6% on its capital, and to write off the balance of income, if any, but not to make a profit. The amendment to the insurance law, which permitted this enterprise, provided that if the Company wished to include these buildings in its statement of assets the rents to be charged could not exceed $9 per room per month. The buildings were completed in 1924 and received an exemption from city taxes under the then existing law. They were an immediate success, and were fully rented as soon as offered to the public, with a waiting list of thousands of families, and have remained fully occupied ever since. The Company has earned 6% on its investment, and has been able to depreciate annually out of income a sum of approximately 3% of the original cost of the buildings. The buildings were constructed at a somewhat lower cost than our assumed minimum because labor costs in 1922 and 1923 were about 20% lower than today. Furthermore, the Company incurred no financing expense and did not charge these buildings with any interest on the money invested in this enterprise during the period of construction. This item is particularly significant since the Company, in order to reduce building costs, discontinued work for a number of months because of the intense labor shortage which prevailed at that time, thus avoiding the necessity of building during the period of greatest labor expense. Building in 1922, the Metropolitan Life Insurance Company was able to buy land in Long Island City very near to 42nd Street, for $1 per sq. ft., to which a small amount should be added for certain utilities which had not been installed when the property was bought. When considering future operations, it should be borne in mind that no land in New York is now available which is as desirable and as cheap as that which was used by the Metropolitan Life Insurance Company. It would seem entirely impossible to build at the present time and duplicate the costs of these houses. When these facts are taken into consideration and when the amount saved through tax exemption is allowed the experience of the Metropolitan Life Insurance Company is approximately in line with the estimate set forth above.

Mr. John D. Rockefeller, Jr., has recently completed two splendid housing

projects, each covering an entire square block. One of these is in the Bronx, the other a group of negro tenements in Harlem. Both buildings contain substantially larger rooms than assumed above and were therefore built at higher prices. The apartments have been sold cooperatively. Both of these enterprises have been very successful, and are admirably accomplishing the purposes for which they were built. The occupants are getting much better accommodations than would otherwise have been possible, and the investor has a reasonably safe investment. He will gradually get his money back with 6% interest, but no profit. Admirable social work is being conducted in the basement of the buildings, as a by-product of the housing venture.

A group of apartments designed by Andrew J. Thomas, the architect of the Metropolitan and the Rockefeller buildings, is at present being constructed in Brooklyn by a limited dividend company, organized under the leadership of Louis Pink. These buildings contain 677 rooms about the size of those in the Metropolitan buildings. The contracts under which these buildings are being erected show a construction cost approximately as assumed above. The land cost is $135 per room. The buildings will be tax exempt because built by a limited dividend company under the provisions of the New York State Housing Law. The rents will be limited to $11 per room per month, as called for by that law for tax exempt buildings in Brooklyn.

Another interesting housing experiment is that of the Lavenburg Foundation. In this case no interest is paid to investors on the cost of the land or buildings. The foundation was established by a gift of approximately $700,000 from the late Fred Lavenburg, which amount has recently been substantially augmented by a bequest from Mr. Lavenburg. A building has been built containing 415 rooms of a size larger than that assumed in this paper. The building is more expensively finished and shows a substantially higher building cost. The rents average a little less than $10 per room per month and cover all running expenses, including a substantial amount of social work carried on in the basement of the building, but no interest return on the investment.

The Amalgamated Clothing Workers have recently completed a very successful group of buildings in the Bronx containing 1185 rooms. The apartments are tax exempt under the State Housing Law and have been sold cooperatively. The rooms are very much larger than the assumed size discussed in this paper, with building costs correspondingly greater. The land was bought for about $3 per sq. ft. The cost of the building and carrying charges were about $1,275 per room with a land cost of about $265, making a total room cost of $1,540.

A number of apartment houses have also been built by the City Housing Corporation at its development at Sunnyside in the Borough of Queens. Five groups of buildings were constructed over a period of several years, varying in size from 170 rooms to 328 rooms. The first two groups of buildings were sold cooperatively;[1] the last three have been rented. Room sizes have all been larger than in the assumed case, and in the recent buildings, considerably larger. The land on which these buildings were built was very inexpensive, averaging about 75 cents per sq. ft., but only about 30% of the land has been covered with build-

[1] Herbert Emmerich, "The Problem of Low-Priced Cooperative Apartments: An Experiment at Sunnyside Gardens", 4 *Journal of Land & Public Utility Economics* 225–234 (August, 1928).

ings. Construction costs have all been higher than those set forth above, because of greater room sizes, and also because the operations were smaller. Maintenance costs have also been higher for the same reasons. In the experience of the City Housing Corporation, it has been found much easier to rent apartments at this price level than to sell them cooperatively. An interesting device has been used to minimize the cost of repairs and losses caused by vacancies, and also to give the benefit to tenants through whose acceptance of long-term leases the savings are effected. Substantial reductions have been made for leases of two years rather than one, and further reductions for three-year leases with deposits to secure the performance of the lease. A large majority of the tenants have availed themselves of the long-term lease.

Obviously, from the above analysis a rental of $11.20 per room per month for a three and a half room apartment, or a total rental of $40 per month is an absolute minimum for this type of apartment. It is impossible to produce apartments in the New York region to rent for $6 or $7 per room, or even $9 per room, as a number of well-meaning but mistaken people have recently been suggesting. The estimate of $11.20 is intended to show a minimum rather than a conservative figure. It is based not only upon a limited return to capital but also on a reduction of all items of expense to a point below the margin of safety. A rental of $13 per room is a more reasonable estimate, even with a limitation of interest return on capital invested, and $14 or $15 per room per month would have to be charged if such limitation were removed, with a still higher rental if room sizes were increased and the building more elaborately finished.

However, it is important to bear in mind that any device which will make possible apartment rentals below the general market level will tend to have an effect greater than the saving directly involved. A tax exemption, for instance, coupled with a limitation of interest return on capital invested, will make possible a rental reduction greater in amount than the direct saving on these two items. The immediate savings will permit of rentals lower than the general market level, and these low rentals in turn will result in further economies by entirely eliminating the item of lost rent and by reducing the expense of repairs.

No reference has been made to costs in other parts of the United States. In many places building costs will be found to be somewhat lower than in New York; the difference, however, as reflected in rentals will not be very great. The analysis of cost set forth above will be found applicable to buildings erected elsewhere, and no great difficulties should be encountered in making allowance for variations in any of the items for differences in local conditions.

THE RATE-MAKING FUNCTION OF UTILITY MANAGEMENT

By F. A. NEWTON

UTILITY management has no function or responsibility of greater importance than that of rate-making. The utility's earnings depend upon the prices charged for the service furnished to its customers. The relations between a utility and the public it serves are largely influenced by the rates, their amount, their structure and the presence or avoidance of unjust discrimination in their application.

The owners of a utility are entitled to a fair return on the value of their property devoted to the public service. It is the management's duty to the owners to secure that fair return; in other words, to see that the rates charged are compensatory.

A second duty of the management is to see that the rates charged are not unjustly discriminatory. Unjust discrimination is prohibited by law. Confidence is the basis of good will and sound business. Nothing can more effectively destroy confidence and good relations between the public and the utility than unjust discrimination in rates. It is, therefore, not only illegal to discriminate unjustly, but it is also poor business to do so.

Management has a third duty which is intensely practical in its requirements. A rate-structure to be successful must be so designed as to be of the greatest possible assistance in securing new business and in stimulating greater use by existing customers.

The responsibilities of the management with respect to rate-making are thus three-fold: (1) to see that the rates charged are compensatory; (2) to see that they are not unjustly discriminatory; and (3) to see that the rates get and hold the maximum amount of business possible.

Complete, successful rate-structures should meet all, not one or two, of these requirements. Obviously it would be a simple matter to make rates which would secure almost any load and which would have a tremendous effect in stimulating sales to present customers, if no attention need be paid to the other requirements. Of what avail, however, is new business if it does not pay. Again, a proposed rate must be rejected if it will cause unjust discrimination.

The fundamental principle of utility rate-regulation is that regulation shall not unduly interfere with management. Public utilities, though subject to state regulations, are, nevertheless, private property. The creation of state commissions with power to regulate rates, securities and the service of utilities, has not superimposed state management on these properties. In the Southwestern Bell[1] case the United States Supreme Court said:

> "It must never be forgotten that while the state may regulate with a view to enforcing reasonable rates and charges, it is not the owner of public utility companies, and is not clothed with the general power of management incident to ownership."

It is true that changes in rates are in most states subject to the approval of a state commission. That supervision is for the purpose of preventing excessive or discriminatory charges for the service

[1] *Missouri ex rel. Southwestern Bell Telephone Co. v. Public Service Commission*, 262 U. S. 276 (1923).

the utilities furnish. Obviously reductions in rates seldom meet with any objection on the part of the public. The commissions' supervision, therefore, deals chiefly with those situations where increases in rates are sought, or where complaints may be made against existing rates or inadequate service.

With respect to the rates to large industrial establishments for power purposes, these customers are generally amply able to take care of themselves. This is competitive business, that is, the utility must compete with the isolated power plant. The interest of the state in the rates to such large users is largely confined to the question of whether these rates may be so low as to throw the burden on the smaller users who are unable to construct and operate their own power plants.

It is my firm conviction, based on experience gained from both the regulating and management points of view that, while rate-regulation is a proper function of the state, rate-making is a function of management. Both the utility and the public will be better off in the long run if this policy is adhered to. Unless and until the state may find, after full consideration of the evidence, that the rates charged by a utility are excessive or unjustly discriminatory, it should not interfere with, or substitute its judgment for, that of the management in practical rate-making. The state commission may, and should, advise as to the forms of rates and their adaptation to conditions, but, if the rates are not excessive or discriminatory and are based upon sound economic principles, a commission should not, and I believe has no right to interfere. Dr. Arthur T. Hadley in "Principles of Rate Regulation"[2] expressed this view when he said:

"On the whole, there has been very strong evidence that you get lower charges and lower rates by leaving the initiative in rate-making to private companies which are trying to get whatever profit they can, than by limiting them to a rate of return fixed in advance or by taking the initiative out of their hands."

No one appreciates more fully than the utility manager the reaction of business to low rates. His experience has demonstrated the relation between low rates and additional business too often for him ever to ignore this principle. While there is a definite limit beyond which he cannot go, namely, the cost of the service, he will do everything in his power to make the rate-schedules the most efficient aid in developing business. Greater volume of sales means lower unit costs. The management which neglects opportunities to increase sales when this can be done in proper ways is indeed short-sighted. Such failure to develop business, increase volume of output and thereby reduce unit costs will ultimately injure the public as well as the utility. Well designed rates can do much to develop business. Poorly designed rates can nullify the efforts of the best salesman. Rate-schedules which fail to do their part in the development of business are not successful rates.

The rate-making function of management is very practical. It deals with facts and not fancies. Today power business constitutes the greater part of the load of most electric utilities. I have in mind one representative, large electric utility company which has in the neighborhood of 300,000 customers. Out of this total, 250 power users take nearly 60% of that company's output. The competition of isolated power plants must be met if these large power loads are to be secured and held. The value of the service thus becomes a factor of great importance. Since rates must be

[2] 16 *Yale Review* 417–432 (April, 1927).

based largely on the cost of service, those costs must be analyzed correctly, thoroughly and intelligently, both the cost to the utility in furnishing the service and the cost to the customers of obtaining it in some other way.

In the effort to obtain large power loads and increase volume of production, it is sometimes necessary to use what may be termed the "additional cost" basis of rate-making. The question is, what would be the added cost to the utility of taking on and carrying the load in question? In the use of this additional cost basis, however, care must be exercised. It seems to me there is but one safe rule to follow in using the additional cost basis, and that rule was well expressed by Mr. Halford Erickson in the earlier decisions of the Wisconsin Commission.[3] He then pointed out that the additional cost basis is justified (1) when the business, if desirable, can be obtained on no other basis; (2) when the rate charged will cover all additional costs, including the added fixed charges, for the business in question, and also something in the way of return on the investment as a whole; and (3) when the utility is fully prepared to give that same rate to all customers whose operating conditions may entitle them to it. When the third condition is faced, the additional cost basis loses much of its attractiveness, but it is the only basis upon which the management may safely proceed.

The management in the exercise of its rate-making function must have courage. When a new rate is made for a new class of business it cannot be expected that such a rate always will be compensatory at once. This is a condition not peculiar to the public utility, but is a situation which every manufacturer must face. When the management has, after careful consideration, become convinced that a large amount of desirable business can be secured, and that this business may be obtained at a rate which will make that load ultimately profitable, it must have the courage of its conviction and adopt and put in force such rate. If the managers of the utilities in the United States had not had confidence in their industry, and had not had the courage of their conviction that there was a tremendous field for the use of electricity, this industry would not stand today as one of the most progressive in the history of industry. New uses for electricity in the home have been developed and encouraged. Tremendous power loads have been taken on and successfully carried in competition with isolated plants. This would not have been accomplished had the management lacked that courage which is the necessary part of successful rate-making.

I cannot agree that the first and most important requisite in making rates for utility service is that such rates shall be simple. Flexibility and adaptability to changing costs and changing conditions are of far greater importance than simplicity. When I speak of simple rates I refer not only to the single rate for a given class of customers, but to the whole rate-structure. The simplest rate-structure would consist of but one rate-schedule. The simplest rate-schedule would be a straight rate per kilowatt-hour. That is the logical end of simplicity in rate-making. Examination of the rate-schedules of the most successful electric utilities in the country will show that they have not one or two, but generally six or seven, or even more, rate-schedules. Experience has demonstrated the necessity of such rate-structures. It is a recognition of a sound

[3] *In re Application of Manitowoc Gas Co.*, 3 W. R. C. R. 163, 175 (1908).

principle of rate-making, namely that separate and distinct rate-schedules should be made for classes of use which possess separate and distinct characteristics. It does not follow that this will bring a multiplicity of rates. There are a few well-defined classes of use possessing fairly well-defined characteristics. Within these classes there may be minor subdivisions with some characteristics different from the class as a whole. However, a modification of a rate-schedule will often be the means of handling what may appear to be a difficult situation. For example, when a power user makes a demand much heavier during the night than in the day time, and when he is paying for his power service on a rate-schedule made up of a demand charge plus a charge for current, the demand made at night may be largely disregarded. Thus, his night demand would not affect materially his demand charge, which would be computed on the demand made during the day. This is a proper and logical method of dealing with such a situation. The utility must provide facilities to take care of its peak load which occurs in the day time. This equipment will largely be idle at night. When use of the equipment at that time can be furnished at low cost, such use should be encouraged. Experience has demonstrated that much additional business can be secured under such an arrangement.

The rate-structure in use today by electric utilities generally is in its essential characteristics the same as it was before the war. It is true that a good deal has been learned in the meantime and rate-schedules have been revised and adjusted to meet changing conditions and greater knowledge, but in the fundamentals the rate-schedules are unchanged. That rate-structure stood the test of war conditions. It successfully carried through the tremendous industrial depression which followed the war. It stood the test of the most critical period in the history of public utilities. These forms of rates have demonstrated their soundness and practicability after long and hard experience.

A structure of rate-schedules may produce sufficient revenue as a whole to be compensatory and not excessive, and yet these rate-schedules may be unjustly discriminatory. While the earnings as a whole may be reasonable, certain classes of customers may be securing advantages at the expense of other classes. It is the duty of the management in the discharge of its rate-making functions to see that the cost of service is divided as equitably as possible among the various classes of customers, and that individual customers in those classes using like service in a like manner shall receive like rates. It is obvious that in serving many thousands of customers some discrimination will result under any system of rate-schedules. It is impossible to make rates for individual customers. Such a system of rates would be too cumbersome to be practical. Accuracy must be sacrificed to convenience of classification. Substantial justice can be obtained by proper classification of the customers and by rate-schedules so designed as to give opportunity to all individual customers to receive through the rate the full benefit of their increased use. Power customers as a rule have better load factors than lighting customers, are less expensive to serve and should, as a class, receive lower rates. The rates to lighting customers, however, should be so constructed that if the individual in that class has a good load factor he may get a low rate also. The old rule still stands that difference in cost of furnishing service justifies difference in rates, but these

differences in rates, other things being equal, should be proportioned to the difference in cost.

Complaints have been rather widely circulated from some quarters that the electric utilities of the country have favored power users at the expense of the small lighting customers, and that the electric utilities have failed to extend the benefits of electric service to the smaller localities. It has been charged that the high rates for residential purposes have retarded the development of the use of electricity in the homes. Each utility must, of course, answer these charges on the basis of the facts in its own particular situation. I have in mind one company which is a typical public utility company operating under no unusual conditions, and the facts with reference to its rates and its rate policies are interesting.

Since 1916 the average rate paid by the residences served by that company has fallen from above eight cents to less than six cents per kilowatt-hour. Few industries can point to a similar record. This material reduction in the average cost of electricity to residences in that company's territory has been accomplished despite the fact that during that period electric service has been extended to a large number of small localities where electricity is not as freely used as in the homes in the larger cities.

During the same period the average rate paid by the company's power customers, and it has some of the largest power users in the United States, has increased over one-half cent per kilowatt-hour. This increase in the average power rate reflects, as it should, the greatly enhanced cost of coal, labor and supplies as compared with 1916 prices. Power business is competitive and the large power user will build his own plant if by so doing he can produce electricity cheaper, fixed charges included, than he can obtain his power from the utility. It is apparant that the power users served by this company have not been favored at the expense of the small lighting customers. The average rate paid by its lighting customers is approximately two and one-half times the average rate paid by its power users. This company has one power customer who uses more electric energy per year than all of the lighting customers in several cities of a combined population of over 300,000 inhabitants. This power user takes its electricity at the company's switchboard, requiring no investment by the utility in the distribution system to serve that customer. By far the greater part of the many millions of dollars invested by that utility in distribution system, pole line, transformers, meters and service connections, is required for the lighting business. The cost of generating the electricity furnished to the home is but an inconsequential part of the cost of furnishing residence service, as is well known to anyone who has made any study of the cost of such service.

During the period in question this particular company has acquired 21 municipal plants. It is now serving 49 localities formerly served by small private companies, and well over 100 other localities which formerly had no service at all. If the rates in the localities formerly served by the municipal and private plants above mentioned were still in force, these localities would now be paying nearly $1,000,000 per year more than they pay the company in question under its rates. This gives no consideration to the fact that many of these localities formerly had only night service. It also does not take into account the fact that street lighting rates have been materially reduced. It also

fails to take into consideration a benefit accruing to these localities which cannot be measured in dollars and cents, namely, the increase in available power capacity. Most of these small localities had reached the limit of their power facilities. It was extremely difficult for them to attract industrial establishments desiring to use power in large quantities, first, because it was difficult to supply the capacity required, and second, because it was impossible to make the rates necessary to get this business.

This particular company, which I again repeat is not an unusual one, has over 130 localities connected with its system, receiving light and power at its standard uniform rates, each with a population of less than 1,000. It is interesting to note that only 14 of these 130 localities have municipal water systems, and only 3 have sewer systems. It cannot be said, therefore, that the utility has been backward in furnishing essential public service to the smaller communities in its territory.

These things have been accomplished as the result of sound, comprehensive, well-considered rate-policies. This company, like most others throughout the country, has made a number of revisions and reductions in its light and power rates since the war, and from these revisions and reductions there has been a decided increase in use of electricity by its customers. This is as it should be, for the aim of modern utility management in its rate-making function is to give to its customers greater and more valuable service at lower rates, with greater resulting profit to the company.

I may say without fear of successful contradiction, that the great majority of the gas utilities of the country are furnishing service to fully 50% of their residence customers at a loss, or at rates which produce no return on the value of the property devoted to their use. In the case of the electric utilities the situation is not quite so bad because of the very large increase in use of electricity in the homes during the last few years. That these conditions exist is well known to utility managers, to public service commissions and to all who have given the subject serious, unprejudiced consideration.

It will be conceded that the maximum rate for gas and electric service should not be more than the value of that service to those small users who pay the maximum rate for the service they obtain. Who will seriously contend, however, that the maximum rates generally in force are higher than the value of gas or electric service to this class of users? In some isolated instances there may be some question in this respect. In the great majority of localities, however, the question does not merit serious consideration.

In this connection it is not amiss to call attention to the fact that reductions in maximum rates only serve to make the situation worse. The utility management which reduces maximum rates in response to political expediency is guilty of a short-sighted policy. If the utility as a whole is earning a fair return on the value of its property, and if at the same time it is serving a very large proportion of its customers at a loss, then a mere matter of arithmetical calculation will demonstrate that the other users are making up this loss and are paying more than their just share of the total cost of service. This in turn makes it increasingly difficult to put the rates for the larger and better load-factor users at the point where these customers may enjoy a rate commensurate with their liberal use of the service. The larger and better load-factor customers are as much entitled to just and reasonable rates as any other class of customers. Furthermore,

this class of users has grown tremendously in numbers in the past few years and promises to increase even more rapidly in the next few years.

One typical electric utility which I have in mind had the same form of rate-schedule for residences 10 years ago that it has today. That schedule is made up of three blocks with a maximum of nine cents and a last block of three cents per kilowatt-hour, based on load factor. From time to time that schedule has been revised so as to make the maximum rate apply to a smaller number of kilowatt-hours. Ten years ago the average rate paid by residence customers to the company was over eight cents per kilowatt-hour. Today that average is well below six cents. At the same time the average consumption of electricity per residence has increased over 100% and what is more important, the average revenue per customer has increased very materially also. That same company has now adopted a lower block of two cents per kilowatt-hour with the express purpose of stimulating the use of appliances and encouraging the freer use of electricity in the homes of its customers for all purposes. I confidently anticipate that five years from now the average cost per kilowatt-hour to that company's residence customers will be below four and one-half cents. Where it will be in 10 years I refuse to guess.

The average cost per kilowatt-hour for electric service in the home has thus been reduced because of increased use by the customers. They are using more and more kilowatt-hours at the lower blocks of the rate-schedule. Ten years ago that company, as was also true of others, was serving a very large proportion of its residence customers at a loss. Many of them are still being served at a loss but the tremendous increase in average consumption, which has resulted from use of more and better lighting and use of appliances, has moved many of those customers into the profitable class.

Because of the fact that the company's generation cost is such a small part of the cost of furnishing gas and electric service to residence customers, and because fixed charges constitute by far the greater part of the cost of service to this class, average revenue per customer is highly important. What a utility management continually strives for is more dollars revenue per residence customer. If the revenue per customer can be increased by a reduction in rates, there will be very little hesitancy in making such a reduction. It must be realized, however, that this stimulation of the use of gas and electricity by residence customers is not a thing which can be accomplished over night. The aim is to revise rates in such manner that as the average rate goes down the average revenue per customer increases, and the customer receives more and more service at a constantly decreasing cost per unit received and used.

Most of the electric utilities found years ago that they could not develop and stimulate the residence business at straight meter rates of 8, 10, 12, or 15 cents per kilowatt-hour, as the case might be. Most of them abandoned the old straight meter rates, and the majority have adopted load factor rates of different types. The gas utilities are realizing that they too must abandon the old straight meter rate-structures. Utility managements became convinced that these straight meter rates per kilowatt-hour or per thousand cubic feet were a real danger to their future development. The public is realizing more and more clearly the great influence of correctly designed rate-schedules in bringing lower costs for gas and electric service to the users of these services.

A DEVELOPER'S VIEW OF DEED RESTRICTIONS

By J. C. NICHOLS*

IN commenting upon the problems and questions discussed in "The Use of Deed Restrictions in Subdivision Development," by Helen C. Monchow, one must realize that the things to be considered in one city may vary greatly from those to be considered in another city. Also the problems vary greatly within a city and frequently within a subdivision. Many grave mistakes have resulted when subdividers in one part of the country have literally copied the restrictions of successful subdivisions in other cities or when they have applied restrictions put into effect a quarter of a century ago to a present-day subdivision, thus failing to recognize changes in modes of home building, requirements of purchasers and the new needs and perhaps new situations created by a modern city plan into which their subdivisions should fit. The great problem of deed restrictions is to create solidarity and stability in a real estate development and at the same time afford sufficient elasticity to meet the rapidly changing conditions of our American cities and the habits of our American people.

The evolution of deed restrictions practice has been remarkable. Fortunately few examples remain of the subdivider who simply works up his restrictions as a medium of selling lots rather than creating stable standards for his property. Only a comparatively few years ago subdividers would often offer a subdivision for sale and then incorporate restrictions into each deed separately as the lot was sold. Frequently, through error, certain important restrictions were omitted in some of the deeds. Also, if sales were not active, the subdivider might lower the restriction requirements on his remaining unsold lots with great unfairness to his early buyers. Or, occasionally, a subdivider might fail in the process of selling his subdivision and the unsold lots thus pass to a new company which would completely ignore at least the moral obligation placed by the restrictions in the early sales.

In contrast with these practices the better subdividers began many years ago to file a restriction agreement as a covenant running with all the land in advance of offering any of the lots for sale, or with all the land except certain designated areas which were exempted with proper notice from the restrictions. Certainly every buyer in a subdivision has the right to know which lots are to be restricted and which lots are not to be restricted. Certainly also he ought to know that certain irreducible minimums have been established through his neighborhood restrictions and, if certain areas are specifically exempted from such restrictions, he should know whether this unrestricted property may be devoted only to retail shops, churches, schools, neighborhood libraries, and such other less injurious purposes, or whether it may pass into industrial or other extremely injurious uses. Reservations of certain parcels of land by the subdivider without some restrictions as to their use, even though it may be for a lower classification of property uses, may

* EDITORIAL NOTE: The editors asked Mr. Nichols to review the monograph by Miss Monchow. His comments were deemed so important and covered the subject matter of the monograph so inclusively that his manuscript is published as an article, rather than a mere book review.

prove to be the downfall of the character of the entire subdivision.

The whole question of the use of deed restrictions has been so splendidly covered by Miss Monchow that it is hardly worthwhile to comment upon the many conclusions or the informative tables she has presented. In this review of the subject matter as she covered it in her monograph, I shall simply accentuate some of the phases deemed especially important from the point of view of a practitioner and refer to a few things which in my opinion she has not fully treated or adequately emphasized, particularly some border-line problems which deserve further attention.

In 25 years' experience in developing the Country Club District in Kansas City and advising and conferring with subdividers throughout the country, many problems have arisen to which it has been difficult to apply any satisfactory formula. For instance, in subdividing some of our earlier and smaller subdivisions of 10 to 20 acres restrictions were made to run only with the land owned in that particular subdivision. Other adjoining subdivisions were later developed with equally as good or better restrictions. Later on, the early restriction expired and, because the owners of the majority of the land in the smaller subdivision were unwilling to extend their restrictions[1], a situation developed with a small unrestricted area almost surrounded by more recently restricted subdivisions which naturally suffered from the expiration of the restrictions in the smaller area.

Protecting the Border

This suggests that a more careful study be made as to the areas which should be covered by the restrictive covenants. Certainly the best interest of the buyer is not served by applying as rigid restrictions on the small area, unless topographically protected, as can be applied on a larger area. Furthermore, it is desirable to get a common covenant running in a number of adjoining subdivisions or undeveloped tracts where possible, even though they may be developed by different owners. In this way one subdivision may not be jeopardized by the changed character of an adjoining subdivision. We frequently provide in our subdivisions that future owners in certain adjoining tracts of land yet to be subdivided may, if their land be similarly situated, have a beneficial interest in and the right to enforce the restrictions in the earlier subdivision and, of course, give the earlier subdivision the same interest and right of enforcement in the later adjoining subdivision. This has proved to be one of the most effective phases of our restrictions and one that has not been generally adopted by many subdividers.

A developer of a small subdivision assumes a grave responsibility when he obligates his purchasers to a rigid set of restrictions and subjects the future value of their property and its desirability as a place to live to uncertain surroundings. Of course, every subdivision has similar boundary-line problems and perhaps not enough consideration has been given by any of our developers to the graduation of our restrictions downward as we approach uncertain border lines. Frequently buyers or purchasers have confidence in us and do not stop to consider the deterioration of neighborhood values which may develop when the property

[1] There are many cases in the country where some individual or some company has been able to control the necessary majority in a certain small subdivision and thus to prevent the extension of its restrictions at the end of a certain period, in order to convert the property into perhaps a higher priced use but with great injury to the adjoining subdivisions.

just beyond the edge of the subdivision may be developed for less desirable purposes. Therefore, the creation of a buffer, either of park land or golf land as a barrier to injurious encroachment of unrestricted or lowly restricted property, is extremely desirable wherever possible. Other methods are a gradation of uses from single residential to apartment to commercial property or the proper placement of public or private schools with large grounds, churches, neighborhood libraries, or other semi-public institutions at the edges of the subdivision.

Another border problem is presented by the subdivider who decides upon his lot and block plan and draws restrictions as to the fronting of homes on boundary line streets of his property without obtaining in advance a reasonable amount of protection as to the future lot and block plan and the frontage of homes on the property just opposite his subdivision. However carefully the subdivider may have set up his protective restrictions within his property their effect may be largely annulled all around the fringes of his subdivision by failure to obtain at least a minimum degree of protection against the future development of the adjoining property. The resulting injury frequently penetrates far into the heart of the well-protected subdivision.

The goal of every subdivider and developer should be to sell not only land but to sell and deliver protection. Injured residential areas frequently create a gigantic economic loss and at the same time strike deeply at the very roots of the desire to own a home. Blighted or abandoned residential areas with no compensating use discourage home owning. The purchaser of a restricted lot who builds his home on it should procure in effect a greater obligation from the subdivider than that represented by the purchase price of the lot. His investment in the home may be many times the cost of the lot and consequently he is entitled to many times the protection represented by the mere price of a few unsold lots.

Adapting Restrictions to Market Sentiment

In this connection the extremely close relation between restrictions and the absorbing power of the market deserves careful consideration. It is ever a nice problem so to determine restrictions as to bring about the best development of the land within a reasonable time. A great many examples of failure could be cited, particularly in high class subdivisions throughout our country, where the courage and vision of the developer led him beyond his market in the determination of his restrictive requirements. On the other hand, if a subdivider too closely follows the absorbing power of his market, restricts only very small parts of his subdivision from time to time, and varies his requirements from year to year to meet immediate market conditions, the result is frequently not in the best interest of the city nor does he create a generally harmonious neighborhood. Perhaps more care and thought and more careful analysis of the comparative buying power of his city should be taken into consideration in the decision of restrictions and area to be restricted. A good developer should ever strive to go as far as practicable beyond the immediate needs and yet not allow his ideals to lead him beyond sound business principles. Deed restrictions should not be used as mere selling arguments but should be a careful estimation of the possible buying power of the community supplemented by a reasonable period of education and encouragement for better home life and better home surroundings.

Duration of Restrictions

The Country Club District of Kansas City was probably the first district in the United States where self-perpetuating restrictions were used. The restrictions automatically extend themselves unless the owners of a majority of the front feet execute and record a change or abandonment of the restrictions five years before the respective expiration dates. Prior to this time many subdivisions in other cities had required an affirmative vote of a majority of the owners to extend the restrictions. This placed the burden upon those wishing to extend. The developer may have died or long since gone out of business and the perpetuation of the original character of this property might have become everybody's business and nobody's business. Much of the property may have been owned by non-residents and the time for extending may have slipped by without notice. In the Country Club District the presumption in favor of the established character of the development for home purposes has prevailed and, if its character is to be changed, the affirmative vote of those wishing the change is required. By this plan used in all our subdivisions for the last 10 or 12 years the restrictions automatically extend themselves unless action otherwise is taken by the majority. The result is a greater assurance to the homeowner as to the stability of his property. With the greater protection to property through such automatic extension of restrictions, particularly if they cover an area of considerable size, the original restriction period need not be so long. Perhaps 25- to 30-year periods are long enough to give reasonable assurance and yet short enough to permit readjustment of restrictions to changing modes of life.

Certain very practical construction or landscape problems, arising out of the rapidly changing standards of American living conditions, are also pertinent in determining the duration of deed restrictions. The advent of the garage, replacing a stable and barn, created a very difficult problem in many subdivisions where restrictions were placed before the garage era, and justified a different restriction stipulation. A few years ago enclosed sleeping porches were largely unknown in many cities. This brought the demand on the part of some owners that they be permitted to enclose open porches in order to make sleeping porches or sunrooms. Many subdividers found their restrictions so drawn, on account of building-line or side-line requirements or percentage of lot area or percentage of lot width requirements that such infractions of restrictions could not safely be permitted.

Another illustration is found in many of our cities where a growing tendency is seen to place the kitchen at the front of the house facing the street but so treated architecturally as not to render it objectionable. In some climates this is particularly desirable on north-front lots in order to permit development of the garden and the living quarters to the south. This tendency was further accentuated by the abandonment of the old-fashioned barn or stable, doing away with the old idea of a back yard and replacing it with a flower garden. Yet the restrictions in many subdivisions throughout the country have been so drawn that permission for such an arrangement has been very difficult to secure even where it could be handled without injury to anyone.

Many of us have made a very careful stipulation as to the building of fences and walls as to height and place and yet have found within a very few years a

complete change in the desires of the home owners. Many requests have been made for an alteration of those restrictions to allow greater use of fences and walls, frequently in accordance with a perfectly acceptable plan if our restrictions could only permit it. I am citing these few instances of changed conditions as an argument for not extending restrictions over too long periods without the power to make desirable changes in the restrictions.

Many subdividers who have stipulated that the front door or front porch of a house must face the street have found this a very unfortunate requirement. The increased use of our streets for automobile travel has practically made obsolete the front porch, which is largely giving way to a side porch or garden side porch. This change in house arrangement has also created a new situation as to lot-width requirements. An occasional subdivider who filed a plat with comparatively narrow lots, stating that not more than one house could be built on any one lot, was confronted with a difficult situation in his efforts to keep each house within the boundary lines of a certain lot. Many subdividers today simply require a certain lot-width area for each home, having found that long, deep lots do not meet the present day demands for wider lots.

The old idea of a uniform building line with no power of change frequently works a grave hardship and results in a stiff, monotonously undesirable appearance. The developer under his restrictions should have the right within reasonable bounds, to make changes as to building lines at least with the consent of owners of the adjoining homes and home sites. The same is true as to the percentage of lot that may be occupied by the residence or the percentage of width of the lot which the residence may not exceed. Also frequently an unintentional violation of restrictions with a slight encroachment of a foot or two beyond the building line or over the side line makes it desirable for the developer to have the right to permit this infraction. Again if restrictions placed on wooded land are not carefully studied and, unless some power of variation is reserved, great forest trees may be sacrificed in order to conform rigidly to the restrictions for placement of the house or a poor adaptation of house to site may be caused.

Many developments have not given careful consideration to the changing modes of placing chimneys projecting beyond the front line of the home; the greater use made of the porte cochere; the attachment of greenhouses to the residences; the building of tea houses, pergolas, and other ornamental features as part of the landscape development. Many of these phases only come about in a community or development as the taste of the people changes or develops. Certainly every effort should be made to give restrictions ample elasticity to permit the fullest and most complete use of the site so long as it does not seriously injure the adjoining owners or the neighborhood in general. May I suggest that I doubt whether any of us dealing with deed restrictions are giving quite as much consideration as we should to this particular problem.

Restrictions and Neighborhood Stores

Another general subject to which more consideration should be given is the desirability of setting aside land in large developments for occupancy by neighborhood shops, or in the case of a number of smaller developments, providing in some of them for such shops. A few years ago most of our cities had only one

well-established downtown business center and a large part of the trade of the city concentrated in this one center. Four strong factors are bringing about a decentralization of downtown business centers: (1) automobile congestion of our downtown streets; (2) the movement to suburban centers of neighborhood picture shows; (3) the outward tendency of large apartment houses, kitchenettes and family hotels; and (4) the entrance of a large amount of suburban and rural trade into the city by good paved highways, whereas a few years ago practically all suburban and rural trade came into the city by railroads generally accessible to downtown centers.

These four factors and many others are bringing about the creation of outlying shopping centers in most of our cities. Unless the proper location of these sub-centers is studied and provided for in neighboring developments they will not be conveniently placed for the residents. Also if the building of these shopping centers is to be left entirely to others than the developer, they will generally be built with very little regard for the effect upon adjoining properties. This is a case where restrictions do not simply prevent a buyer from doing certain things but, if properly drawn, will permit the developer or buyer to build a shopping center under certain reasonable regulations such as a reasonable setback of shops from the streets; perhaps a provision for planting space for shrubbery and trees in front of the shops; the creation of loading courts in the rear of the shops; control of such shops to a maximum of perhaps not more than two stories in height; and also architectural control so that the design and color will harmonize with the residences in the neighborhood. This is a good example of community and municipal obligation so frequently referred to by Miss Monchow.

Administration and Enforcement of Restrictions

We are thoroughly in accord with the view frequently expressed that the "retaining of the approval of the plans" is one of the most important clauses in any restrictive covenant. While we have used this clause in all recent subdivisions, we have not yet reached the conclusion that we can with safety and fairness to our owners completely abandon a certain minimum-cost requirement. On the other hand, we believe that a certain fairly irreducible minimum is applicable to the various subdivisions or the parts of a large subdivision, which gives a fundamental basis of protection and assurance. As various parts of the subdivision develop and as more costly homes may be built in certain areas, a subdivider may restrict upwards by adding an additional cost-requirement in a particular deed on any particular tract in order to bring about group harmony among the several parts of his property. We have applied this same practice to the minimum requirement of site width for any house. As a certain neighborhood develops with homes on larger lots, we feel an obligation has been created to widen the remaining lots for the residences to be built in that particular neighborhood. The owner has the right to assume that no home will have a site-width less than a certain minimum amount. If the improvement of a neighborhood justifies greater width of lot, he depends upon us to increase the required widths in each future sale. This we regard not only as good business but as a moral obligation to the early buyer.

Many subdividers have carefully provided that the plans of each home be subject to the approval of the developer

but have not provided for future alterations in the house or changes in the color scheme of the house.

This matter of approval of plans should not be limited to consideration of the house about to be built but should also consider its effect on adjoining homes. Bright red roofs are allowed to clash with adjoining bright green roofs. Tall roofs overtower houses of lower design. Driveways are permitted at a point on the side of the lot that injures the porch of the house nearby. The grading of a lot is permitted which may not only unfairly discharge surface water on to the adjoining lot but may create a height of terrace that greatly injures the adjoining lot. Comparatively few subdividers control the planting of shrubbery, while as a matter of fact the planting of tall shrubs may be just as injurious to the adjoining owner as the erection of a high wall. Or shrubbery may be so placed at the front of a lot as to endanger the lives of children on the sidewalks at private driveway crossings. Many subdivisions permit the erection of exposed fuel oil tanks or the placement of garbage or trash cans at a point very objectionable to the adjoining owners. Some of us have perhaps not given sufficient consideration to the placement of outbuildings, such as garages, as it may affect adjoining property nor the placement of garage doors as it may affect the view from adjoining property. Too frequently the developer thinks largely of the appearance of the house from the street and does not give sufficient consideration to the appearance of the side or rear elevations of the home so far as they may be viewed by adjoining owners.

Of course, the problem of approval of the plans, as has been well said by Miss Monchow, is closely related to the proper administration of this regulation. To us this is one of the most serious considerations confronting all those interested in deed restrictions, for arbitrary application may have serious consequences. It generally takes many years for public sentiment in any community to become adjusted to surrendering a private right to the extent of submitting to the judgment of a realtor, a neighborhood association or art jury in the determination of a design of the home which he proposes to build with his own money for his own family. Fortunately most realtors have been sufficiently diplomatic and reasonable in the use of this power and as a result it is gaining public support, but this very support increases the obligation of realtors to evolve the best plan for the use of this particular restriction.

In Kansas City we have placed the power of enforcing restrictions, even including approval of plans, in a board of directors elected from the neighborhood rather than in the hands of an outside group of architects or artists. The theory is that these directors have a vital interest in the continuance of the established character of the development, they are elected by vote of their neighbors and thus represent the lotowners and afford a sound medium for perpetuating the ideals and standards of the development. They are free to command the advice of architects whenever needed. On the other hand, the argument is advanced that an outside jury might not be influenced by neighborhood feeling and might bring into play greater technical skill in the approval of plans. It would be interesting to observe over a period of years the comparative results of plans passed upon by each of these agencies.

Other duties of these directors, as well as the plan of organization, deserve further description. Since comparatively

few subdividers continue their interest in a subdivision after the last lot is sold, some provision should be made for efficient execution of approval of building plans. In Kansas City we have divided our properties into 14 sections, each under a separate home association having five directors. Each association covers an area of approximately 500 families, on the supposition that this is a practical size for close community and neighborhood interest. All property is sold subject to an assessment to provide funds for all community matters not provided by the municipality and power is given to the boards of directors of the homes associations to use their neighborhood funds for the enforcement of the building restrictions. These funds are also used to pay for hauling trash, plowing snow, taking care of street trees, keeping vacant property cleaned, maintaining neighborhood playgrounds, tennis courts, entrances, ornaments placed by our company in park areas, and providing general community service at a reasonable cost. We believe that the value of these associations to the neighborhood justifies their continuance and that they afford a means of enforcing restrictions even beyond the life of our company. We have never had a director who refused to serve when elected. We have never had a suggestion for the abandonment of these homes associations. On any attempt at a violation of the restrictions the homes association has immediately responded in defense.

What I particularly wish to emphasize, however, is the obligation of a developer to set up a workable plan for enforcing restrictions, and handling approval of building plans after he ceases to be interested directly in the further development of his subdivision.

One aspect of the enforcement of restrictions which requires emphasis is the need for alertness to prevent the first incipient infraction. Study of many subdivisions where the restrictions have gradually fallen into disuse shows the difficulty of finding the exact time when the character of the property actually began to change. One or two very conspicuous infractions develop and residents begin to look around and find that for years a gradual deterioration has set in and that scores of violations have occurred throughout the subdivision. Although some of the violations may have been very slight and not noticeable by the general neighborhood, they brought about a gradual further encroachment on the restrictive covenant. One owner, seeing that another owner has somewhat violated his restriction, goes a little further in the violation. Then some adjoining owner, realizing that the restriction had not been properly regarded by his neighbors, either in disregard or desperation, seriously violates the restriction and suddenly the neighborhood awakens to the fact that the abandonment has become very general and the restrictions of little force.

A woman may have a pet canary and sell a few baby canaries to the children of the neighborhood. She may later add parrots and send out circulars and you have a full-fledged bird store. Or some esteemed lady may be quite active as a literary critic. For a fee she may criticize articles and help market them, all incidental to the use of the home as a residence. The field may be promising and she may advertise in a trade journal using her residence address. It has passed to a business use and continued advertising of this activity must cease or your restriction of the whole neighborhood may be in danger. Similarly the paying of board by a visiting friend may imperceptibly ripen into a commercial boarding house business. It would

be hard for even a next-door neighbor to tell you when the house became converted to a business use. Yet the courts might not differentiate between a refined bird store or a literary critic's office and a public garage so far as the infraction of restrictions is concerned.

There is another phase of the use of deed restrictions to which sufficient thought is possibly not given. The original deed restriction in every subdivision should underlie if possible all the mortgages on the land. The importance of such a precaution is shown by the example of a developer who has in good faith bought land, given back a mortgage on it to the seller, later procured the release of part of it and sold it under restrictions. Then he finds himself, through financial reverses, unable to pay the balance of his mortgage; he is subjected to foreclosure and the remainder of his land passes into unrestricted use greatly to the injury of his buyers. The National Association of Real Estate Boards has been working for some years on this problem to give a greater assurance of protection to buyers in a subdivision.

It is comparatively easy to write a treatise upon the proper form of deed restrictions and discuss them in a theoretical way. However, the proper adaptation of restrictions to the real estate business and the proper enforcement of restrictions are very difficult and complicated matters. No subdivider should attempt to restrict a development unless he is willing to incur a large expense in the enforcement of the restrictions. He must maintain an organization charged with the responsibility of checking accurately on the building line of every foundation. The mere approval of plans at the office will not suffice. He must with vigilance observe that the restrictions are complied with throughout the construction of the building and the completion of the development of the grounds. Enforcement is very difficult after construction has been completed. A violation unobserved until too late is frequently allowed to remain, particularly where it has been unintentional and yet the accumulation of these overlooked violations may lead to the downfall of the whole character of the property.[2]

Another suggestion is that no subdivider should depend only upon the statements in his abstracts or his original deeds as to any unrestricted property which he may reserve in his development for such uses as neighborhood shops, schools, churches, libraries. Many owners may buy their property and, although supplied with complete abstracts and records, they honestly may not know that this or that tract is not restricted. Respect for the use of deed restrictions will be much greater if proper signs, although small, are maintained upon all unrestricted property so that everyone buying in the subdivision may have full knowledge of any future uses permitted at any place throughout the entire development.

The effectiveness of proper deed restrictions will be further increased if, in designating certain areas for other than single residence purposes, space is provided for parking cars of the patrons of shops, apartments, churches or schools, for if parking of these cars is allowed to over-crowd the adjoining residential

[2] We recently had a case in our office where an owner requested permission to enclose with glass a porch on the side of his house for a very sick wife. The erection would have been a violation of the building restriction. The case was a very pathetic one and required the most delicate handling, and yet our organization felt it was of such importance, although all of our property had been sold in that neighborhood for many years, that we went to much expenditure of time and money to bring about its proper solution. We did not feel we could afford to have a precedent of violation established even under these urgent circumstances.

streets it may be a deteriorating influence on that property.

There has been a general tendency in developments throughout the country to restrict more carefully the areas given over to larger homes than the areas given over to smaller homes. In our opinion the restrictions should be as carefully considered and cover as many phases for modest homes as for the largest homes. The necessity for the creation of good environment and consequently good citizenship is as great in the subdivision for small homes as it is in the subdivision for large homes. But, of course, the subdivider must be very careful lest his restrictions increase the cost to the builder of the modest home.

Restrictions are drawn for a good purpose and this purpose can be so much better accomplished if the subdivider will do all the practical things within his power to make these restrictions desirable and effective through the years; make them a stabilizing and value-creating influence, build up respect for them; and cause them to be regarded as a bulwark of strength to the property rather than a handicap.

Furthermore, the developer should live up to his own restrictions. Frequently he may prohibit billboards or large advertising signs of others and yet mar his subdivision and spoil the view of his buyers by the erection of his own large subdivision signs.

Restrictions and Community Welfare

The use of deed restrictions to create residential neighborhoods may effectively block industrial growth of the city by developing for residences land which should have been reserved for industrial uses. The injury to the city in the long run may be as great as would be the introduction of industrial property into the heart of an otherwise beautiful residential area. Here again the use of deed restrictions should be very carefully considered in relation to the needs of the city and broad comprehensive city planning.

A few years ago it was regarded as axiomatic in city building that the good residential areas shifted almost every decade and the use of deed restrictions enduring for long periods was a daring attempt in the face of these rapid changes. Perhaps today with the spreading of cities over large areas we are reaching the time when we can promote stability and permanence in neighborhood character. If so, deed restrictions may be used with a great deal more assurance and be more effective in creating a permanent allocation of various parts of the city to their best and most related uses. The whole movement of city planning has encouraged a more careful analysis of future needs of our cities. The developer who studies and works with his city planning officials may be able, by the careful use of deed restrictions, to bring about a situation where homes may pass down through generations of a family and we will begin to get more real traditions in American home life. Thus the more permanent our restrictions may become the more important is their careful consideration and enforcement.

Few people realize the terrific economic waste, estimated at more than one billion dollars a year, of rapid changes in the character of residential neighborhoods in American cities. Stability, permanence, or, if you will, orderly progress, conceived and aided by city planning officials and by developers using deed restrictions, combat this waste. Restrictions aid scientific planning to meet the needs for urban land and enable greater economy for the city at large in the size of water and gas mains, sewers,

street widths, paving widths, the size and number of school buildings, fire stations, shopping centers, park areas, playgrounds, and so forth.

While the effectiveness of the use of deed restrictions by the subdividers of the country really gave birth to the idea of zoning by municipal authority, I believe practically all subdividers agree that zoning, as desirable as it is for cities as a whole, cannot, at least for the present, supplant all the advantages gained by the use of deed restrictions. These arguments have been well covered by Miss Monchow and I only wish to add approval of her conclusion as I know it exists among the more thoughtful subdividers of our country.

The community aspects of the problem need to be kept in view. I question the claimed inviolability of the rights of those who buy lots in a restricted subdivision in anticipation that the restrictions will expire and the property pass into uses of higher monetary value. Such a purchaser sees his neighbors building their homes, many of whom have no other thought than to use the land permanently as a homesite. He accepts the advantages of this superior environment for his own home and receives the benefits of the restricted neighborhood. The time might come when his own lot would be worth considerably more money were he able to convert it to another use; or he might have held his lot vacant expecting to realize great gain from selling or converting to business use, particularly if the lot is on the edge of a subdivision adjoining business property. Yet he should realize that the gain to him would be far less than the neighborhood loss to others. His individual right is and should be subordinated to the neighborhood's welfare. The use of deed restrictions as applied to subdivisions marks an advance in the understanding of American liberties based upon the higher regard for public welfare, and the benefits of the use of deed restrictions are measured in neighborhoods or sections of the city and not measured in individual gains or losses.

While my discussion has largely been devoted to single-family residential areas and corollary shopping centers and semi-public uses, fortunately the developers of apartment-house and family-hotel districts and even the developers of retail business centers and commercial districts are becoming more and more convinced of the value to them of placing restrictions upon such properties. It is hoped that the time is near when the developer of apartment-house districts will as carefully safeguard the perpetuation of the character of the neighborhood as the developer of single-home areas. It is hoped that the developer of a wholesale district, or a retail shopping center, has come to realize the value of deed restrictions in controlling the use of property, the design and color of the building, setbacks, side building lines, frontages, loading courts, placement of rear doors, loading docks, type of heating plants and all physical features of his property as carefully as those in a high-class, single-residence development.

In many of our largest cities the skeleton or frame of the city has hardened and replanning involves enormous cost. The suburban areas of these larger cities, however, and the thousands of smaller cities and towns are still plastic and a grave responsibility and opportunity rests with all those directing the future physique of their respective communities to make wise and careful use of deed restrictions.

FORT ATKINSON, WISCONSIN: A CASE STUDY OF PUBLIC OWNERSHIP

By F. A. STATEN

PUBLIC ownership of public utilities has always afforded a fruitful field for discussion. Because both the protagonists and antagonists feel so strongly on this question, it is difficult to have an unbiased appraisal of either private or public ownership and operation in a particular situation. Once the citizens of a community have had an opportunity to view a proposed purchase or sale in its true light, no one can quarrel with them if their idea of an intelligent public policy does not then accord with his own. It is regrettable, however, that the facts about a property to be purchased or sold are seldom adequately and fairly stated, and what is at best a difficult decision becomes for the voter a guessing contest.

The gas plant and the electric distribution system at Fort Atkinson, Wisconsin, are among the municipal utilities which have recently been sold to private corporations. The Fort Atkinson utilities are worth noting as a case study in municipal ownership, and the sale transaction with the attending controversy indicates how difficult is the position of a voter when a question of purchase or sale is before him. We may summarize some of the results of municipal ownership in Fort Atkinson and then pass on to a brief discussion of the arguments favoring sale.

The Electric Utility

The Fort Atkinson electric plant was taken over by the City in 1901. At that time the City issued bonds to the amount of $20,000 which were later retired by the utility. The first reliable report to the Wisconsin Railroad Commission is that of 1909, when the electric property was reported at a value of $39,477.93. Until 1914 the City operated a generating plant but after that year purchased current from the Wisconsin Gas and Electric Company, operating only a distribution system, with the steam plant as emergency standby. The gas plant was purchased by the City in 1920 at a cost of $54,000. On December 31, 1925, the book value of the electric plant was $183,241.52, and that of the gas plant $217,098.55. The electric plant expansions were made almost entirely out of the earnings of that utility, and in addition $33,005.52 was transferred in 1922 from the surplus account of the electric utility to cover gas plant construction made from the assets of the electric department. The remainder of the gas plant expansion was financed primarily by the sale of bonds. At the time of sale, December 1, 1926, the book value of the combined utilities was $425,159.99. This includes net additions made during the first 11 months of 1926 when the utilities were owned by the City.

Taking the last six years of public operation, 1920 to 1925, inclusive, the gross revenues of the electric utility increased from $64,269.72 in 1920 to $97,419.13 in 1925. Table I summarizes the facts of growth for the period. From these figures it is clear that the plant was more than maintaining the margin between revenues and expenses. Significant also is the ratio of net income to the property and plant account plus a share of current assets based upon

TABLE I. OPERATING RATIO, RATIO OF OPERATING INCOME TO TOTAL REVENUES AND RATIO OF NET INCOME TO PROPERTY AND PLANT ACCOUNT, ELECTRIC UTILITY, 1920–1925.

Year	Operating Ratio	Ratio of Operating Income to Total Revenues	Ratio of Net Income to Property and Plant Account
1920.....	81.9	18.1	13.73
1921.....	77.8	22.2	13.67
1922.....	79.3	20.7	11.94
1923.....	81.5	18.5	8.58
1924.....	74.3	25.7	12.79
1925.....	74.4	25.6	12.44

relative book values of the electric, water, and gas utilities. These are the returns after a liberal depreciation allowance of 5% was made, a more liberal charge than is allowed to private utilities by the Railroad Commission of Wisconsin. The depreciation reserve account as of December 31 increased steadily during the six years.

1920.....	$44,944.75
1921.....	54,730.35
1922.....	59,092.89
1923.....	63,905.39
1924.....	69,456.49
1925.....	70,397.97

The depreciation reserve for the electric utility in 1926 was over 38% of property and plant. It might be argued that a smaller allowance for depreciation would be adequate, in which case the net income would be proportionately increased.

The earnings of the utilities were reinvested in plant expansion. The balance in the surplus account of the electric utility doubled during the last six years of public operation:

December 31,	1919.....	$ 67,058.97
"	1920.....	86,266.32
"	1921.....	97,951.30
"	1922.....	84,448.98*
"	1923.....	99,398.56
"	1924.....	122,692.25
"	1925.....	147,190.27

*$33,005.52 was transferred to the gas utility during this year to cover extensions made out of electric company assets. Without this deduction the final surplus would be $180,195.79.

The question may arise as to whether this was a genuine surplus. In this connection it should be noted again that the depreciation reserve was 38% of the book value and would appear adequate to care for any deferred maintenance for a property of which more than half was added in the last 10 years of municipal operation. The removals of property for the six years in question are shown in Table II.

TABLE II. PERCENTAGE OF PROPERTY AND PLANT REMOVED AND CHARGED TO RESERVE FOR DEPRECIATION

Year	Percentage
1920.....	.69%
1921.....	.93
1922.....	1.52
1923.....	1.98
1924.....	1.58
1925.....	5.50

The ploughing in of profits enabled the electric plant to finance the necessary expansions of plant and services without burdening the City or the utilities with debt. The property and plant account of the electric utility grew rapidly as shown by the following summary:

December 31,	1920.....	$117,122.04
"	1921.....	123,122.04
"	1922.....	148,148.75
"	1923.....	159,868.26
"	1924.....	168,198.24
"	1925.....	183,241.52

Gas Plant

The gas plant was taken over by the City in poor condition in 1920 at a cost of $54,000. The City started in immediately to improve the plant, spending $47,783.37 the first year. The gross revenues of the plant during the six months of 1920 that the plant was owned by the City were $17,313.75. From this figure the revenue for 1920 may be

estimated at $34,627.50[1] In 1925 the gross revenues were $43,859.21. The operating ratio and ratio of net income to property and plant plus a share of current assets based on relative book values of the separate utilities are shown for the six years in Table III.

TABLE III. OPERATING RATIO AND RATIO OF NET INCOME TO PROPERTY AND PLANT, GAS PLANT, 1920–1925.

Year	Operating Ratio	Ratio of Net Income to Property and Plant
1920	107.3	— .6
1921	81.4	.89
1922	89.9	— .46
1923	79.3	1.39
1924	68.7	2.56
1925	68.8	3.48

This is not a startling report when any one year is considered alone, but the trend shows a constant improvement, dating from the day the plant was taken over by the City. It is indeed unusual that a city takes over a run-down plant, builds it up until it begins to pay for itself, and then sells it again to a private company at investment cost. The original private plant made a failure of the enterprise, and now the rehabilitated utility is returned to private owners. It should be noted here that since 1922 the gas plant has paid its share of taxes, and has made a charge to depreciation.[2]

The following physical statistics for the gas plant are indicative of growth. The number of consumers increased 49% between 1920 and 1925, and the number of feet of street mains in use increased 62%, indicating an expansion in service. In 1921 the loss of gas was 24.2%, and this had decreased to 14.7% in 1925, a marked increase in efficiency.

Growth under Municipal Regime Summarized

Something might be said as to the profitableness of the municipal utilities as a whole. At the time of the sale of the electric and gas systems, the combined book value of the gas, electric, and water systems was $635,777.28. The total advances made by the City to this date, that is to say, the City equity account, amounted to $159,938.36. Reinvested earnings—surplus—amounted to $240,133.53. The combined return to the utilities in 1925 was $38,257.98, 24% of the City equity, or more than 9.5% upon the combined City equity and surplus. Further, it is significant that the City equity account was actually less by several thousand dollars on December 31, 1925, than on December 31, 1920, whereas the surplus for the combined utilities increased from $138,428.95 to $240,133.53.

Arguments for Sale of the Property

The above data give an estimate of the economic value of the property which the City of Fort Atkinson sold to the Wisconsin Gas and Electric Company. Behind the whole thought of selling was the desire of Fort Atkinson for a community building and city hall. To bond the City for the project would bring the City indebtedness dangerously near the legal limit, and increase taxes considerably. Hence this was not considered feasible. Thereupon the Council considered other sources of funds and fell upon the gas and electric plants. Negoti-

[1] No report is available for the first six months of 1920.

[2] The charges made for taxes and depreciation, expressed as percentages of property and plant, are as follows:

Year	Taxes	Depreciation
1922	2.0%	2.6%
1923	2.3	1.9
1924	1.3	1.9
1925*	1.8	1.9

*In 1925 the Wisconsin Gas and Electric Company reported taxes amounting to 3.2% on property and plant.

ations for sale were begun with the Wisconsin Gas and Electric Company. As things developed, the question was not so much "do you want to sell the utilities?" as "do you want a new community building?"[3]

The negotiations were begun in September, 1926, and culminated in an informal agreement which was accepted by the City Council on September 10, 1926. This was followed on October 5 by a preliminary contract between the City and Company in which the Wisconsin Gas and Electric Company agreed to purchase the gas and electric plants for $450,000, subject to the approval of the Railroad Commission and of the voters. The agreement, including the sale price, was approved by the Railroad Commission on October 20, the decision dealing only with the fairness of the consideration and not with the advisability of sale which is a problem of public policy.[4]

When the Railroad Commission had approved the proposed transfer, the proposition was presented to the voters.[5] The following first page article from the *Jefferson County Union* of September 17, 1926, was one of the first introducing the question to the voters:

"Shall We Sell Gas and Light Plants?

"Fort Atkinson is the only city in the state, Mayor Weld states, which owns its gas plant. There are only a very few which now own their light plants, all the rest having sold them. The light and gas users of Fort Atkinson pay higher rates than are paid by the same classes of users in surrounding towns where electric current and gas are privately owned and distributed. This is due to the fact that "overhead" had been eliminated to a large extent and it is also due to other economies not possible in a small plant.

"The American Appraisal Co. put the value of our municipally owned gas and light plant at $400,000. Mayor Weld, by and with the advice and consent of the City Council, placed a value of $450,000 on these two plants and a private corporation stands ready to pay this price. To complete the sale, however, a favorable vote is necessary and this our people will soon have a chance to give.

"Our city now stands a drain of about $50,000 per year to pay interest on $231,000 of debt and to pay up that debt at the rate of about $25,000 per year. The debt would be wiped out and taxes could be reduced. $231,000 from $450,000 leaves a balance of $169,000 which would give us enough for a municipal building and leave a nice balance in the treasury.

"The ram shackle affair now used for city purposes would be torn down and a fine building erected that would house the fire department and council and provide room for polling booths, comfort room, etc., for the use of people who come to Fort Atkinson to trade.

"As to the personnel, the new company would use all of the present employes whose training makes them valuable.

"Our lowest light rate is 10 cents per kilowatt hour. Black Hawk Island has a 3⅓ cent low rate. Watertown, Whitewater, and other cities have a 3 cent low rate. Some difference! Our 10 cent rate practically bars the use of electricity for washing machines,

[3] Section 66.06, subsection (13) (a), *Wisconsin Statutes*, requires that the resolution or ordinance of the city council initiating a sale transaction shall specify the "disposition to be made of the proceeds." Since this point was involved in subsequent litigation testing the legality of the sale, mention of it is here made. See *Wisconsin Gas & Electric Co. v. City of Ft. Atkinson*, —*Wis.*—, 213 N. W. 873 (1927).

[4] See *Re City of Ft. Atkinson et al.*, P. U. R. 1927 A 569 and *Wisconsin Gas & Electric Co. v. City of Ft. Atkinson*, *supra* n. 3.

[5] In spite of the fact that the sale was actively favored by the Mayor, the Council, two local newspapers and the Chamber of Commerce, a vigorous opposition developed. Some complaint was made by opponents of the sale that it was difficult to get publicity for their case. At the same time it developed that several full-page advertisements favoring the sale were inserted by the Mayor at City expense. In one case a leading citizen presented an article opposing sale, which the newspapers would not print free of charge and for which the City would not pay. This article was published at the expense of the Wisconsin Gas and Electric Company ("magnanimously," so the editor wrote). Another newspaper gave a column each week free of charge to the opponents of the sale. The final vote was 934 for the sale, 916 against.

and cooking ranges, except for the rich. The 3 cent rate enables a poor man to use an electric stove."

At best, such articles must have been very confusing to the citizens of Fort Atkinson. It is difficult to understand why a city should dislike the distinction of being the only one in the state to own its gas plant. The plant was acquired in 1920 in a run-down condition, after private enterprise had failed to maintain the service. At the time of sale the plant had again been built up, enlarged and improved until it could be classed as a good plant and was being carried at a reasonable investment figure. The statement that the gas and electric users of this City paid higher rates than those paid by the same classes of users in surrounding towns was, as will be shown, to a large extent incorrect and needed much qualification. The appraisal referred to was made before the sale was thought of and was for insurance purposes. Of the City debt of $231,000, $141,250 was attributable to the utilities. The electric plant was debt-free; the utilities paid the interest on the debt applicable to them and in 1926 made the necessary retirement of principal. It will be noted that the article makes no distinction between debt on self-sustaining property and other property. Privately owned utilities are always in debt and make no effort to wipe this out completely. As for taxes, in 1925 the utilities paid $11,564.84 or about 1.9% on property and plant. This is not as large a tax as would be paid by a private utility, but it is a greater amount than would revert to the City, if the plants had been privately owned, since under the Wisconsin law 35% of the utility tax goes to the state and county.

As to the rate comparison,[6] the first statement was that the lowest light rate was 10 cents per kw.h. Actually, the residence lighting rate was 10 cents for the first 20 kw.h. per month; 8 cents for the next 155 kw.h. per month; and 6 cents for the next 175 kw.h. per month. Next it was said that the surrounding towns had a 3-cent *low* rate. It is clear that Fort Atkinson's *high* rate was being compared to the *low* rate of Whitewater, and other cities.

The residence rates of the Wisconsin Gas and Electric Company for the Whitewater district which included Fort Atkinson, Whitewater, and Watertown were 9 cents per kw.h. per month for the first 9 kw.h. consumption for each of the first six active rooms, and 9 cents per kw.h. per month for the first 7 kw.h. consumption for each of the rooms in excess of six, together with a secondary charge of 3 cents per kw.h. for all energy consumed in excess of that paid for at the primary rate. Active rooms exclude bedrooms, attics, porches, basements, but include garages. Probably there is an average of at least three active rooms per house. In that case the consumer would pay for 27 kw.h. at the rate of 9 cents (less a discount of 5% which makes it a little more than 8½ cents). A consumer analysis in Fort Atkinson made by the Railroad Commission in 1925 reveals the fact that over 83% of the consumers in Fort Atkinson use less than 30 kw.h. per month, 70% less than 20 kw.h. Under these circumstances few would benefit by the 3-cent rate unless the consumption were increased one half. Table IV shows the actual lighting costs to a consumer under each rate. Those wishing to use electricity for cooking were given a special cooking rate which was 10 cents for the first 10 kw.h.

[6] It should be noted that the private Company reduced rates during the sale controversy. The following rate comparison is based upon the new lowered rates on file with the Railroad Commission of Wisconsin in November, 1926.

TABLE IV. COMPARISON OF LIGHTING BILLS UNDER MUNICIPAL AND PRIVATE OPERATION

Kilowatt-hours Used	Municipal Rate	Private Rate
10	$1.00	$ .86
20	2.00	1.72
30	2.80	2.57

used per month and 3 cents for all over 10 kw.h. used per month.[7]

During the controversy little mention was made of the commercial lighting rates. A comparison of the increment rates for commercial lighting shows interesting results. (Table V.) The percentage of consumers in each quantity group is taken from the consumer analysis in Fort Atkinson made by the Railroad Commission in 1925. While the table shows rates only for quantities to 120 kw.h., the municipal rate continues to be lower for larger consumption. It should be noted here, however, that the Wisconsin Gas and Electric Company has another rate which could be applied to commercial lighting. This rate is difficult to compare since it is a two-part rate based partly on demand, but probably some consumers would be favored by it.

It is difficult to do more than estimate roughly the power charges under the different rates since the individual charge is a function of demand and consumption. However, since the total sale of commercial power in Fort Atkinson at the time of selling the plant was only somewhat over 100,000 kw.h. per month, we may assume that no one consumer used more than 50,000 kw.h. per month. Assuming a load factor of 20%, the charges for varying amounts of power to 50,000 kw.h. have been computed under either private rate as well as under the municipal power rate. (Table VI.)

TABLE V. INCREMENT RATES FOR COMMERCIAL LIGHTING UNDER MUNICIPAL AND PRIVATE OPERATION

Kilowatt-Hours	Percentage of Customers Included	Municipal Rate	Private Rate
10	10.95%	$1.00	$1.09
20	9.49	2.00	2.18
30	8.30	3.00	3.28
40	7.24	4.00	4.37
50	6.20	4.80	5.46
60	5.37	5.60	6.55
70	4.73	6.40	7.65
80	4.22	7.20	8.74
90	3.85	9.00	9.83
100	3.52	9.80	10.93
110	7.09	10.60	12.02
120	5.23	11.40	13.11

TABLE VI. CHARGES PER KILOWATT-HOURS USED FOR POWER UNDER PRIVATE RATES (STANDARD AND OPTIONAL) AND MUNICIPAL RATES

Kilowatt-hours Used	Wisconsin Gas and Electric Company		Municipal
	Standard	Optional	
5,000	$311.10	$248.15	$266.91
10,000	561.50	486.75	472.86
20,000	985.76	828.02	804.84
30,000	1,383.11	1,149.54	1,135.91
40,000	1,748.28	1,443.03	1,437.70
50,000	2,114.45	1,734.96	1,735.17

Both utilities had also a special increment rate for power service. In this case the municipal rate was the more favorable, particularly to the small consumers.

The rural service rates of the private Company favored the larger consumers, and this was no doubt justified where the density of consumers was low and the installation cost per consumer high. (Table VII.)

A comparison of gas rates is best made by computing charges for varying amounts of gas in several cities where the plants are privately owned and operated (Table VIII). Fort Atkinson is the only city having a municipal plant.

It is seen by this comparison of cities chosen at random that five had rates

[7] The correct rate-schedule was given in a later edition in response to an inquiry of a citizen. No acknowledgment of the error in the above was published, however, and no attempt was made to correct the impression conveyed.

TABLE VII. COMPARISON OF MUNICIPAL AND PRIVATE RATES PER KILOWATT-HOUR FOR FOUR ACTIVE ROOMS OR LESS, RURAL SERVICE

Kilowatt-hours Used	Percentage of Consumers*	Private Rate	Municipal Rate
10	20.27%	$2.00	$1.25
20	12.62	2.00	2.50
30	7.08	2.35	3.55
40	4.80	2.70	4.60
50	3.66	3.05	5.65

* The total percentage of consumers is 48.43%.

lower than Fort Atkinson, two the same and three higher. Of the five having lower rates all are larger than Fort Atkinson, and but two of those having higher rates are smaller.

The general conclusion as to both electric and gas rates is that the net difference to all consumers was very small.[8] And it is further concluded after personal conferences with informed persons and considering the financial and operating reports of these utilities, that those private rates which were lower than the municipal rates could have been met by the municipal utilities with little change in the profitableness of the enterprise. To be complete this comparison should also appraise the service rendered by the private company and the municipality. The information necessary to such an appraisal is not at hand. Suffice it to say that no criticism of the service or management of the municipal utility was presented in all of the pro-sale publicity issued.

Judging from the available records here summarized, the Fort Atkinson utilities appear to have been successfully operated under municipal auspices and were satisfactorily serving the community at rates comparable to those of the private company nearby, and in addition were paying a generous return on the money invested. If the citizens of the community understood reasonably well the facts concerning the utilities and chose to sell in order to erect a community building, this was their privilege. And even if they were uninformed as to the facts, possibly it may develop that the sale was not unwise. Only this should be noted: The sale of the Fort Atkinson utilities was in no way an example of the failure of municipally operated utilities.

[8] In connection with the reduction of rates by the Wisconsin Gas and Electric Company during the sale controversy (see n. 4), the Company announced that its rates would be effective as of December 1, 1926, and refunds would be made to consumers benefited by these rates. These refunds, chiefly to residential customers, were later said by the Company to aggregate $3,867.

TABLE VIII. GAS RATES IN 11 WISCONSIN CITIES

City	Population*	Production	Cost of Gas Consumed Per 1,000 Cu. Ft.				
			1,000	2,000	3,000	4,000	5,000
Madison	38,378	Water Gas	$1.10	$2.15	$3.20	$4.25	$5.30
Oshkosh	33,162	Coal Gas	1.50	3.00	4.50	6.00	7.50
Watertown	9,299	Coal Gas	1.70	3.25	4.80	6.35	7.90
Janesville	18,293	Water Gas	1.70	3.40	5.00	6.60	8.20
Waukesha	12,558	Coal Gas	1.65	3.30	4.95	6.60	8.25
Fort Atkinson	4,915	Water Gas	1.90	3.80	5.70	7.60	9.50
Burlington	3,626	Water Gas	1.90	3.80	5.70	7.60	9.50
Ashland	11,334	Water Gas	1.90	3.80	5.70	7.60	9.50
Monroe	4,788	Water Gas	2.00	4.00	6.00	8.00	10.00
Antigo	8,451	Water Gas	2.35	4.70	6.85	9.00	11.15
Menomonie	5,104	Water Gas	2.50	4.90	7.30	9.60	11.90

* 1920 Census.

RAILWAY TERMINAL AIR RIGHTS DEVELOPMENTS AND THE MOVEMENT OF LOCAL LAND VALUES

By WILLIAM D. PENCE

AN already alert public interest in "railway terminal air rights utilization" on a large scale has recently been spurred to fresh vigor. About a quarter century ago this use of air rights was developed as a by-product of electrification of a dense passenger terminal lying in touch with an important business and residential area. The dramatic success of this earliest, large-scale air rights project in New York has in turn inspired new projects of similar type, but with local variations, not only in New York but in other railroad centers of this country.

Historically one may trace the germ of the "air rights idea" far back, long before the advent of the steam railroad, when publicly traveled ways, like the Old London Bridge[1] were sometimes overtopped by buildings used for business and residence, in part for public purposes. In a minor way and in one guise or another there have been instances akin to air rights, as now known, in the earlier days of railroading in this and other countries. But not until recent years have the possibilities of this by-product, if planned in an orderly fashion and worked out under the most favoring circumstances, been realized.

Like the airplane and the automobile —two other lively offsprings born in the same period of the art of transport— air rights development has the trait of lending the vital spark to many other activities with which it comes in contact. One familiar instance of this neighborly influence is the upward movement of local land values under the spur of the "air rights impulse." It is the chief object of this survey to trace the latter movement in unison with the progress of a typical undertaking of this kind, with a view both to a clearer insight as to the impulse itself and to mark out in round figures a yardstick which may be of service in forecasting what may occur in other air rights projects.

The steps taken in reaching this objective are here briefly stated: (1) Selection of the area to be studied; (2) Brief history of the chosen air rights development; (3) Description of the available land value data; (4) Need for, and application of, tests of this material; (5) Presentation of results obtained from analyzing chosen data.

I. *Selection of Typical Locality*

The quest for typical situations which gave fair promise of yielding ripened results suitable for this analysis was narrowed to the early developments in the City of New York, after scanning the projects at various stages of progress in

[1] See "The City of London," *The Times*, (1928), pp. 32, 80–84. Pictures of "The Bridge" made in the years 1550 and 1616 show buildings of about the conventional London height through most of its length; these buildings were destroyed over the north half by the fire of 1663; and again, the few that had been rebuilt in that part, by the great fire of 1666; the buildings throughout, as restored after 1666, were finally removed in 1758 by Act of Parliament.

Another familiar "tradesmen's bridge," still so used, the Ponte Vecchio in Florence, is said to have suggested (1898) the extension of the Art Institute building over the Illinois Central tracks on the Chicago lake front (1911).

PLATE I. AERIAL VIEW OF GRAND CENTRAL TERMINAL ZONE, NEW YORK CITY, LOOKING WEST OVER GRAND CENTRAL STATION, 1928*

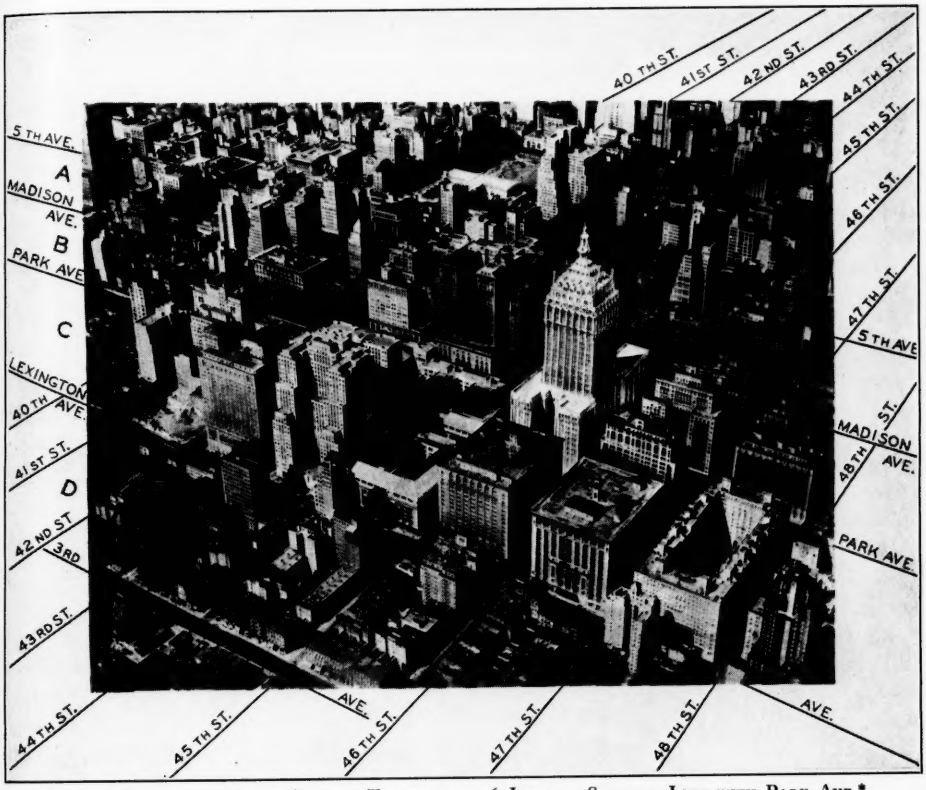

PLATE II. YARD OF GRAND CENTRAL TERMINAL, 1906, LOOKING SOUTH IN LINE WITH PARK AVE.*

*The central tall building beyond the Station in Plate II—the Belmont Hotel—is identified in Plate I at 42nd Street and Park Avenue. The tall white office building to right of center, Plate I—the "New York Central Building" (1928)—is pierced by a two-way vehicular ramp providing an elevated link for Park Avenue traffic from 46th to 41st Street.

several other cities. A general review was made of each of the several early New York cases referred to above: the Grand Central Zone (1902), the Pennsylvania Zone (1904) and the Hudson Terminal (1906), shown in photographic view in Plates I to IV inclusive. The first-named was an instance of change of motive power and the reconstruction of an existing terminal; the other two were new construction and involved electric power from the outset. The Pennsylvania project at its inception lay in an area of relatively low land values; the other two in districts of higher values. The Hudson Terminal was assured initial success, while the others were more in the nature of experiment, requiring years to "prove up" the air rights principle. These and other factors marked them as differing in type despite certain elements in common. The Grand Central Zone was selected for first review in detail, in part because it appeared to reflect in clear-cut form and in generous measure the phases here sought and, in part, because this zone is rated as the pioneering case of the utilization of air rights, as such, and has been carried through on substantially the lines of the initial forecast.[2]

History of Grand Central Terminal Air Rights Development

Among the factors making for early success in the air rights venture in the locality of the Grand Central Station was the pressure exerted by both residential and business demands for a natural outlet eastward from Fifth Avenue north of 42nd Street. The change of motive power, which removed entirely the discomforts connected with the use of steam locomotives, opened up a clear field to the most exacting of the modern types of site use, and a prompt response to the offer of room for expansion became increasingly certain from about 1890 on. At the time of completion of the original Grand Central Station on 42nd Street in 1871, the better residence center had already moved northward as far as 23rd Street. The course taken by this center through a long period of years is added to the index map (Chart I) of Manhattan Borough and may be noted as follows:

1820. Bowling Green and the Battery
1830. Bond and Bleeker Street
1840. St. Johns Park
1850. Washington Park
1860. Fifth Avenue and 14th Street
1870. Fifth Avenue and 23rd Street
1880. Fifth Avenue and 34th Street
1890. Fifth Avenue and 49th Street
1900. Fifth Avenue and 59th Street

It has been said that the rebuilding of the Grand Central Terminal in the years following 1903 chanced to coincide with the movement of smart New York from the West to the East Side as indicated by the sharp demand for luxurious living quarters east of Fifth Avenue yet near it. The residential center had already shifted northward to around 59th Street, and the pressure from this source was foreseen as one vital factor making for early success when the air rights wave was at its frontier stage late in 1902.

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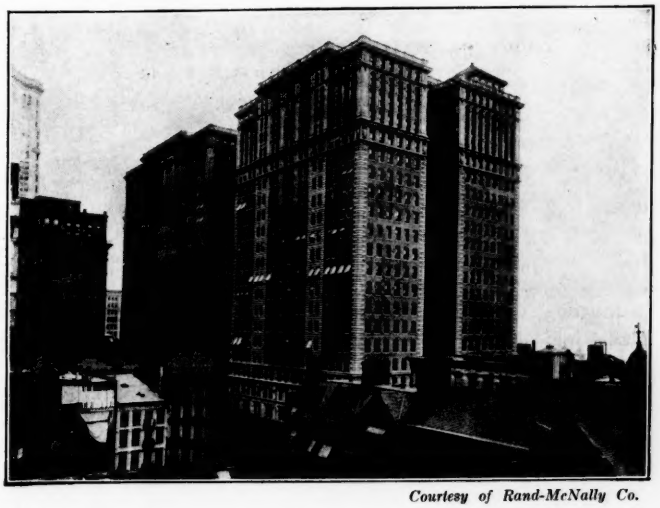
[2] See following references (1926); *New York Times*, November 17; *Barrons*, November 29; *New York World*, December 5; *Railway Age*, December 11; *Engineering News-Record*, December 16. An outline of the plan to "utilize all of the valuable air rights" released by the change of motive power in the Grand Central Terminal was submitted to the president of the New York Central in December, 1902 by William J. Wilgus, then chief engineer; later, with the approval of the terminal plans, he was made vice-president in charge of construction and served as chairman of the Electric Traction Commission, and directed the work through its basic features. Mr. Wilgus, aided by his associates—engineering, architectural and legal—is credited with the forecast and with the basis for the ultimate success of this initial, huge-scale, "air rights" project.

PLATE III. AERIAL VIEW OF PENNSYLVANIA TERMINAL ZONE, NEW YORK CITY, LOOKING NORTHEAST OVER MANHATTAN STATION.

Courtesy of Rand-McNally Co.

PLATE IV. HUDSON TERMINAL BUILDINGS, LOWER MANHATTAN, CHURCH STREET FROM CORTLANDT TO FULTON STREET.



Courtesy of Rand-McNally Co.

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The first Grand Central Station, built in 1871, had separate waiting rooms for the three railroads that used it, the New York Central and Hudson River Railroad, the New York and Harlem Railroad and the New York, New Haven and Hartford Railroad. By 1885 it was found necessary to build an annex to the east for incoming trains; by the late nineties there was an expenditure of several million dollars for the rearrangement of tracks, for the consolidation of waiting rooms, and for additional office space. With increasing density of traffic, consideration was given to the means of improving operating conditions, including preliminary estimates for electrification of the terminals. A casualty in the tunnel approach, which occurred in January, 1902, stimulated early action on the completion of these plans, which embraced these outstanding features: the laying of tracks at two levels for entering and leaving the station, the enlargement of the station with use of ramps instead of stairways, the restoration of Park Avenue to full public use with provision for an elevated two-way traffic route passing around the station on shelves, the restoration of all cross streets then closed, and finally the proposed use of the space above the terminal for revenue-producing structures with the rental of store space within the station. The plans were approved by the Board of Directors in June, 1903, and active construction was begun in the following autumn. To assist in handling the construction work and to expand the terminals as a benefit to operating conditions, large additions were made to the land holdings adjoining Madison, Park and Lexington Avenues, increasing the terminal area from 23 to 79 acres, with a final reclamation of about 40 acres available for building sites—an element of the first importance in working out the program for the utilization of air rights.

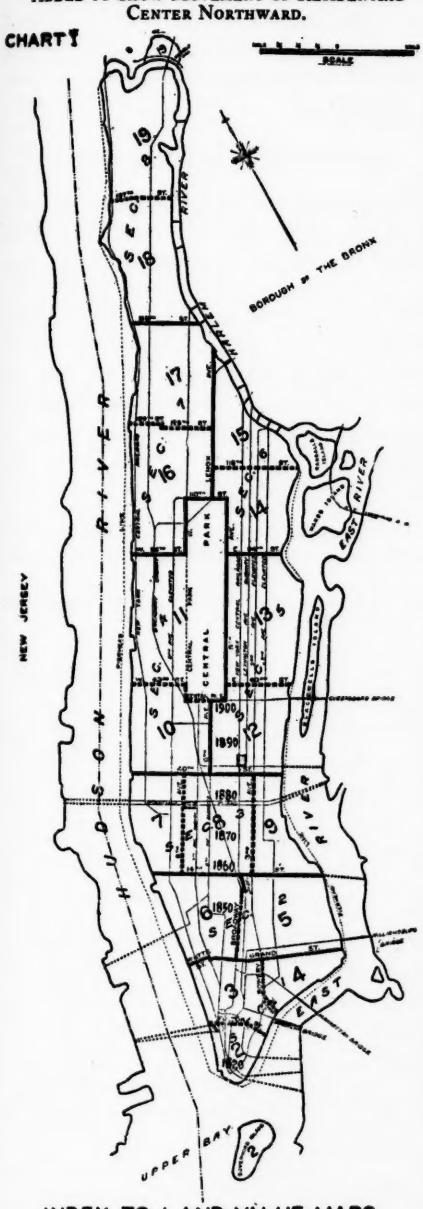
Previous to the opening of the new station in 1913, a beginning had been made on the air rights structures with the completion and successful use of the Grand Central Palace, the Biltmore Hotel in 1914, the apartment buildings between 47th and 48th Streets and between 50th and 53rd Streets in 1916 and 1918, and the Commodore Hotel all of which, with others of the air rights group, fully confirmed the success of the experimental activity entered into some 15 years earlier. The present status of the Zone, including structures added by the end of 1928, is illustrated in Plate I.

Nelson P. Lewis, commenting on the Grand Central Terminal situation, in 1916,[3] after success was fully assured, said:

". . . This station affords a striking example of the effect of electrical operation upon railway terminals. When operated by steam it was a noisy, unsightly intrusion into one of the busiest and most attractive parts of the city. The locomotives of arriving and departing trains and those used for switching constantly emitted smoke and steam and occupied a space some 350 feet in width at its southerly end, while eleven cross streets and one important avenue were interrupted by it, causing long detours to traffic and effectually separating the districts on either side, so that movements of the police and fire-fighting forces from one side to the other were greatly interfered with. When electricity was substituted for steam as motive power, the tracks were depressed, so that all of the interrupted streets were carried over them with grades that in no place exceeded four per cent., and these but for short distances, while the terminal was at the same time greatly enlarged, its width being increased to 817 feet, and provision was made for the accommodation of local trains below the main track level . . . Several large and important buildings have already been erected over the tracks, and it is now ap-

[3] *The Planning of the Modern City*, p. 155 (New York: John Wiley & Sons, Inc., 1916, 1923).

CHART I. INDEX TO LAND VALUE MAPS, MANHATTAN BOROUGH, NEW YORK CITY, WITH YEARS, 1820–1900, ADDED TO SHOW MOVEMENT OF RESIDENTIAL CENTER NORTHWARD.



parent that all of this enormously valuable space over what was formerly a railway yard in the very heart of a great city will be available for profitable use, and that the revenue derived from it will go far toward meeting the interest on the immense cost of this undertaking, which, with the station building itself, has considerably exceeded $50,000,000. . . . Park avenue is to be carried around the station building on an elevated platform, so that its central portion can pass over Forty-Second street with a separation of grades on two very busy thoroughfares."

The proposed restriction of height of buildings along Park Avenue north, cited above (1916), was subsequently abandoned.

The limits of area adopted for the present review of local land values are from 40th Street to 57th Street, south to north, and from Third Avenue to Fifth Avenue, east to west. As a means of tracing more closely the effects of the air rights impulse, the percentage results are shown finally with reference to an "inner zone" embracing the area bounded by 42nd Street and 52nd Street and by Lexington Avenue and Madison Avenue in contrast with the "outer zone" making up the remainder of the larger district. The results are also localized by recording block averages[4] in dollars per square foot, illustrated in typical value-profile form in the two directions, south to north and west to east. (Charts VI and VII).

The local values were examined for the three years: 1904, the approximate time of fully launching the reconstruction of the Grand Central Terminal; 1915, just following the formal opening of the new station and the successful use of the earlier air rights structures, including the Biltmore Hotel; and 1928. During the same period, approximately, the

[4] The city plats in the section considered generally apply a single number designation to a pair of rectangular blocks; the term "block average" as used above refers to the average value of land in a single rectangle.

population totals and the totals of passengers annually through Grand Central Station ranged as follows:

Year	Population of Manhattan Borough	Population of The City of New York	Number of Passengers Annually Through Grand Central Station*
1905 ..	1,950,000	3,850,000	.....
1906 ..	.....	.....	19,268,102
1915 ..	2,306,094	5,224,585	24,748,755
1928 ..	1,752,018	6,017,702	44,818,830

*The number of air rights hotel rooms at the Station (exclusive of apartment hotels) was 1,000 in 1918 and 4,100 in 1928.

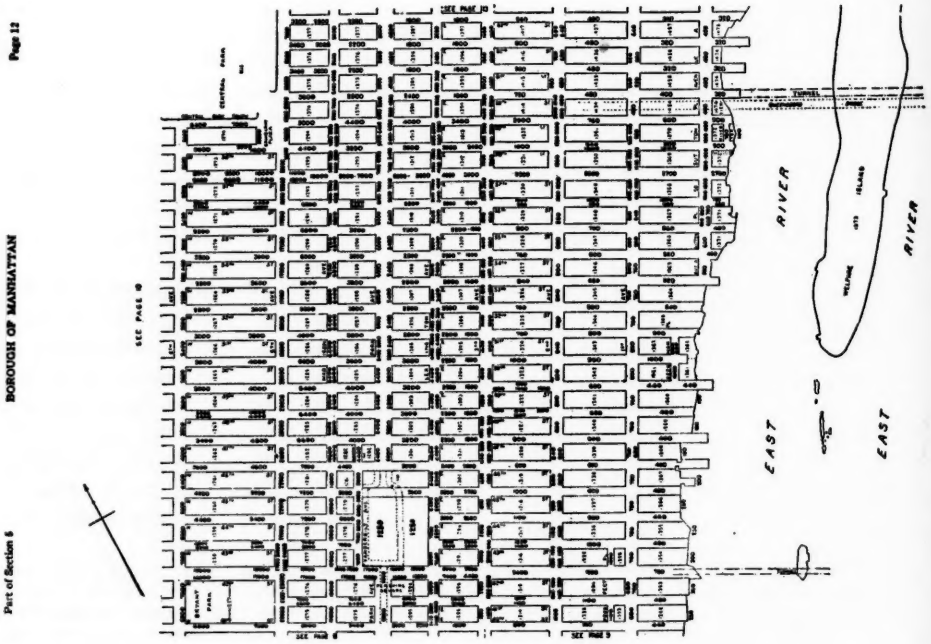
A summary of the results of the single impulse here under review shows: First, the electrification and reconstruction of the greatly expanded terminal, with the complete restoration of the streets long in disuse; then the covering in of the remaining space over the railroad tracks and the erection of huge revenue-producing buildings where formerly were railroad yards open to the sky—in brief, the transformation from the status reflected in the view in Plate II to that in Plate I.

II. *Available Land Value Data*

To achieve the aim of this study, it is necessary to arrive at the market value or the fair cash value, as nearly as may be, of the parcels of land embraced in the series of city blocks selected for this survey and for the years selected. Nominally this is the legal basis for the conventional local assessment of real estate for taxation. One writer, versed in assessment practice in New York, discussed the subject as follows:

"The rule is practically universal that real estate shall be assessed at its market value.

CHART II. LAND VALUE MAP OF PART OF ASSESSMENT SECTION 5, MANHATTAN BOROUGH, NEW YORK CITY, EMBRACING THE GRAND CENTRAL DISTRICT.



This idea is phrased in various ways in different statutes. One of the best phrases, perhaps, was formerly contained in the tax law of New York to the effect that real estate shall be assessed at 'the sum for which it would be appraised in payment of a just debt of a solvent debtor.' It is commonly provided that real estate shall be assessed at 'its full value' or 'fair cash value.' The judges have sometimes said that all these phrases mean the same thing and in common language signify 'market value.' Sometimes it may truly be said that certain real estate has no market value in the sense that there are no buyers ready and willing to pay any reasonable sum for it. In such cases it is proper to fall back upon the other phrases of the law such as 'full value' and the sum for which the real estate would be appraised in payment for a debt."[5]

To this is added by the same writer:

"The end and aim of real estate assessment is to secure such a valuation of every parcel that the tax imposed upon it shall bear a proper relation in proportion to its value to the tax imposed on every other parcel within the tax district."[6]

In tracing possible variations in the trend and texture of the local assessment work for the years considered, it was disclosed that a vigorous advance in recorded values occurred in the City of New York during the year 1903, amounting to upwards of 40% for the five boroughs as a whole, and to more than 50% for the Borough of Manhattan alone. This prepared the way for a new cycle or standard, at the "full value" level, initiated in 1904 with the purpose thereafter to maintain this basis. This emphatic change of practice in the assessment level came at the transitional period of the Greater New York (1900–1910), which is described in the exhaustive study on "land values" by Lewis and associates[7]. The increase in land value in the City of New York from the assessment status of 1900 to that of 1910 is given as 116.3%; for the decade 1910–1920, 15.1%.

As prescribed in the form of certificate and oath, the deputy tax commissioner reports among other items covered in the field work his determination of the values of the property examined in detail as "*the sums for which said property under ordinary circumstances would sell.*" The meaning of this phrase is best seen by scanning the instructions under which the assessor works and noting the safeguards which finally surround the valuation results. Comparison of the earlier practice[8] with that of recent years

[5] Lawson Purdy, "The Assessment of Real Estate," *The Real Estate Handbook* (Blake Snyder, ed.) (New York: McGraw-Hill, 1925), ch. 37, p. 336.

[6] *Ibid.*, p. 336.

[7] ". . . Consolidation had been effected in 1898, the new city government was functioning, subway construction was begun, large street improvements previously unattainable by the scattered villages were being planned for the outlying boroughs on the basis of the borrowing power of the enlarged city and the revenue derived from Manhattan and downtown Brooklyn. The electrification of the railroads entering Manhattan was in progress, many tall office buildings were being erected and the whole city was enjoying unusual expansion. During this period the Department of Taxes and Assessments made a deliberate attempt to bring assessed values, already higher proportionately than values in the suburbs, up to the full value as required by law. Since many of the prices paid for property which furnished the basis for the assessments, were speculative prices, the net result was a rate of increase in the assessed land values within the city much greater than that in the population." "Land Values—Distribution Within New York Region and Relation to Various Factors in Urban Growth," by Harold M. Lewis, Executive Engineer, Wayne D. Heydecker and Raymond A. O'Hara, *Engineering Series, Monograph No. 3, Regional Plan of New York and Its Environs* (1927) (p. 59).

[8] The earlier practice of the Department of Taxes and Assessments is described in a paper by Lawson Purdy, President of the Commissioners (1906–1916), found in the Annual Reports: 1907, pp. 65–68; 1908, pp. 73–76; reprinted from the *Record and Guide* of June 29, 1907. The publication of the Land Value Maps, the first of the kind, was secured during Mr. Purdy's incumbency as an additional safeguard.

While serving as Secretary (1896–1906) of the New York Tax Reform Association, Mr. Purdy represented the business men of Minneapolis (1902), and later the Governor of Minnesota (1905), in advocacy of an amendment to the State Constitution, and of legislation thereunder, related to taxation. Shortly following

(Continued on page 158)

shows much the same spirit through the years reviewed; the outstanding improvement of method appears to center in the adoption, in 1909, of a system of Tentative Land Value Maps showing frontage unit values for inside lots on all sides of every block, revised and reissued annually. Early experiences in the use of these Land Value Maps, with salient extracts from the preface to the 1928 Mapbook, are given in Appendix A.

Chart I is the index map for the Borough of Manhattan and Chart II (both reduced from the 1928 Mapbook) is the Tentative Land Value Map for the portion of Assessment Section No. 5 which embraces the Grand Central Terminal and surrounding locality (Section 5 runs from 40th Street to 96th Street, east of Sixth Avenue and Central Park to the East River).

The final assessed values of individual items of real estate—"unimproved" and "with improvements thereon"—are revised annually and published separately for each Borough, in the *Supplement* to *The City Record* (an official organ of the City). Chart III shows a fragment from the 1928 *Supplement*, including the headings and type of detail. Whether or not these values might legitimately be used for this study was a question recognized as apparently debatable. Accordingly, reference is here made to the valuable results of an early comparison of valuation methods, which bears directly upon the problem encountered in this study.

CHART III. SAMPLE SHOWING TYPE OF DETAIL OF PARCEL VALUATIONS IN ANNUAL "SUPPLEMENT OF THE CITY RECORD," MANHATTAN BOROUGH, NEW YORK CITY*

SUPPLEMENT.

Owner or Occupant	Description of Property: Size of Lot	Description of Property: Stories High	St. No.	Ward, Lot or Map No.	Value of Real Estate, Unimproved	Value of Real Estate with Improvements Thereon
Section 5, Volume 1, Block 1277—Between 5th and Vanderbilt Aves.; Between 42d and 43d Sts.—5th Ave., East Side, 42d to 43d St.			N.E.C.			
	27.5x 133 ir.	6	503	1	1,750,000	1,800,000
	37x108	18	505	2	1,075,000	1,500,000
	36x133 ir.	12	507	4	1,000,000	1,350,000
	37.6x123	12	509	72	960,000	1,300,000
	62.11x 123 ir.	17	501	69	2,250,000	3,175,000
			S.E.C.			
42d St., North Side, 5th to Madison Ave.						
	40x 135.5 ir.	15	.....	6	800,000	1,375,000
	60x100.5	10	5	8	1,150,000	1,325,000
	22x100.5	6	9	10	400,000	440,000
	22x100.5	5	11	11	400,000	435,000
	22x100.5	5	13	12	850,000	1,250,000
Madison Ave., West Side, 42d to 43d St.			N.W.C.			
	200.10x 121 ir.	15	316	14	4,800,000	7,000,000
			S.W.C.			
Madison Ave., East Side, 43d to 42d St.			S.E.C.			
	66.8x100 134.2x	12	331–327	52	1,150,000	1,875,000
	147.3 ir.	2	317	20	4,400,000	7,800,000
			N.E.C.			
Vanderbilt Ave., West Side, 42d to 43d St.			N.W.C.			
	200.10x 68.5 ir.	6	51–53	27	2,250,000	3,500,000
			S.W.C.			
43d St., South Side, Vanderbilt to Madison Ave.						
	42x 100.5 ir.	2	50	46	255,000	445,000
43d St., South Side, Madison to 5th Ave.						
	22x100.5	4	14	63	$175,000	$195,000
	17x100.5	4	12	64	135,000	155,000
	58x100.5	10	6	66	500,000	850,000
	25x35	2	Rear 4	67½	185,000	255,000
	10x100.5	V	.....	68	Value Reflected	
	15x25.5	V	.....	68½	60,000	60,000

* Names of Owners Omitted.

The Sales and Opinion Methods Compared

The best practice of the local assessor in assessing real estate for taxation is virtually a combination of the "land sales" and the "local expert opinion" methods of valuation. Sometimes it is one of these methods, again the other, and commonly a blend of the two. Because of this fact no little interest attaches to any means of tracing the relation or trend of the results obtained by these two processes of arriving at

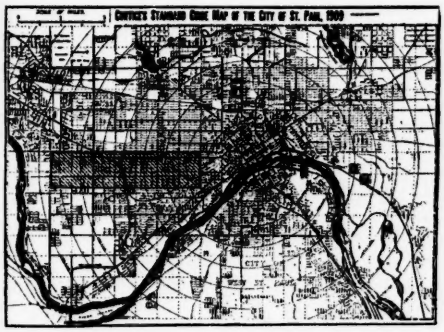
(Footnote 8 continued from page 157)

this legislation, tests were made on a large scale by Mr. Thomas A. Polleys and others in the City of St. Paul on the relation of land values found by the "Land Sales" method and by the "Local Expert" method. The condensed results and manner of conducting these tests (reviewed in 1909 by the author) are summarized below in this article.

land values under what might be termed normal conditions—as to skill of application and freedom from disabling bias. It is obviously difficult to devise a convincing test of this sort. However, in the course of the present review some consideration was given to the results of two tests or comparisons of this type, both made in connection with the review of land valuations of extensive city areas—one mainly of residential property, the other of railway terminal lands.

The first-mentioned test, known at the time it was made (1908) as the "Polleys' test," was planned and supervised by the late Thomas A. Polleys, an able investigator of land values who was at the time secretary and tax commissioner of the Chicago, St. Paul, Minneapolis, and Omaha Railway Company.[9] It was undertaken to arouse

CHART IV. MAP OF CITY OF ST. PAUL, MINNESOTA SHOWING DISTRICT USED IN COMPARATIVE TEST OF "LAND SALES" AND "LOCAL EXPERT OPINION" METHODS OF LAND VALUATION.



local interest in St. Paul in the improvement of real estate assessment practice. The test embraced a methodically planned comparison of final results derived from a skilled application of the "land sales" method (performed mainly by Mr. Polleys personally) with results developed through the use of the "local expert" (or "locality expert") opinion method by a selected group of real estate men, covering approximately 300 city blocks (about 3-½ square miles) in the City of St. Paul shown by the shaded rectangle on Chart IV. The second case was a routine comparison of the final results obtained by the two methods on about 500 acres of railway terminal land, spread among 15 wards or assessment sections in the City of Milwaukee. The "land sales" method was applied under the direction of Professor W. D. Taylor, then (1903) chief engineer of the Wisconsin State Board of Assessment, in the initial valuations under the Ad Valorem Tax Law. The "local expert" method was used by a skilled group of local men experienced in assessment work, serving under the supervision of F. W. Adams, secretary of the Chicago, Milwaukee & St. Paul Railway Company (the owning company). In both tests the "local expert" method gave the larger result: in the St. Paul test the excess shown in the aggregate for some 277 "localities" or blocks was 3.8%; in the routine comparison of final totals in the Milwaukee case, the excess of the railroad's value was 3.5%. (Tables I and II).

TABLE I. COMPARISON OF RESULTS BY TWO METHODS OF VALUING REAL ESTATE: (A) BY LAND SALES METHOD; AND (B) BY LOCAL EXPERTS, AT ST. PAUL, MINNESOTA*

Classification of Property	Number of Blocks	Average Value per Front Ft.		Excess (B) over (A)	
		(A)	(B)	Amt.	%
Group 1. Less than $10 per front foot	96	$6.15	$6.70	$0.55	9.0
Group 2. $10 to $20 per front foot	69	14.10	15.45	1.35	9.6
Group 3. $20 to $40 per front foot	82	28.55	29.55	1.00	3.5
Group 4. Above $40 per front foot	30	63.10	63.20	0.10	0.2
Total	277	$20.95	$21.75	$0.80	3.8

* Investigation by Thomas A. Polleys, reproduced from 4 Wisconsin Railroad Commission Reports 501, 533.

[9] "Real Estate Valuations," by Thomas A. Polleys, *Proceedings of the Minnesota Academy of Social Sciences*, Vol. 1 (1908), pp. 59–78. (Also: "Valuation of Real Estate by the Wisconsin Tax Commission," by Professor Thomas S. Adams, pp. 79–104).

A report on the circumstances surrounding these two calibrations and the manner of conducting them, with an outline statement of the relation of the sales and opinion methods of valuing lands (made after review of the tests cited above) was presented to the Wisconsin Railroad Commission in a rate case[10] by the author while serving as Chief of the Engineering Staff of the Wisconsin Railroad and Tax Commissions.

Testing the Final Assessed Values

In the light of the foregoing experience some test of the final assessed values published in the *Supplement* to *The City Record*, reputed to be the "full values," was deemed advisable, before adopting these figures as the basis for analyzing the movement of local land values in the Grand Central Zone. Accordingly, such tests as were practicable were made. It was recognized that the assessing staff, working under pressure and relying on information that is "in lag" and often incomplete, was likely to make estimates of value that tend to be low in localities where values are rising at a rapid rate, as the reverse may be true in case of a sharp downward trend. In any case, the "assessments are, as a rule, fully a year old and were based on the evidence of the preceding years." The process of handling the broader problem of fixing the equalization ratios for entire bor-

[10] *State Journal Printing Co.* v. *Madison Gas and Electric Company*, the initial rate case brought under the Wisconsin Public Utility Act (1907), decided March 8, 1910 (Wis. R. R. Comm. Report, Vol. 4, 501, 528–535.)

TABLE II. COMPARISON OF RESULTS OF SALES METHOD AND LOCAL EXPERT OPINION METHOD OF VALUATION OF REAL ESTATE, ALONG LINCOLN AVENUE, ST. PAUL, MINNESOTA.*

Along Lincoln Avenue (3½ miles)	Average Ground Value Per Front Foot			Excess (B) over (A)	
	(A) By Land Sales Process	(B) By Local Experts		Amount	Percent.
		Number of Experts	Value		
1. Dale to St. Albans	$47.00	7	$50.85	$3.85	8.2
2. St. Albans to Grotto	49.00	8	51.20	2.20	4.5
3. Grotto to Avon	49.00	8	51.80	2.80	5.7
4. Avon to Victoria	50.00	9	51.65	1.65	3.3
5. Victoria to Milton	35.75	7	36.05	0.30	0.8
6. Milton to Chatsworth	29.00	8	29.85	0.85	2.9
7. Chatsworth to Oxford	27.50	8	26.55	—0.95	—3.5
8. Oxford to Lexington	24.00	7	24.20	0.20	0.8
9. Lexington to Dunlap	15.00	7	16.45	1.45	1.0
10. Dunlap to Griggs	12.00	7	12.20	0.20	1.7
11. Griggs to Syndicate	8.50	7	8.90	0.40	4.7
12. Syndicate to Hamline	8.50	7	9.35	0.85	10.0
13. Hamline to Albert	7.00	7	8.05	1.05	15.0
14. Albert to Pascal	7.00	7	7.95	0.95	14.0
15. Pascal to Saratoga	5.00	6	6.40	1.40	28.0
16. Saratoga to Snelling	5.00	5	5.90	0.90	18.0
17. Macalester to Cambridge	9.00	6	9.35	0.35	3.9
18. Cambridge to Baldwin	9.00	5	9.20	0.20	3.2
19. Baldwin to Fairview	9.00	5	9.20	0.20	2.2
20. Fairview to Prior	3.50	5	3.90	0.40	11.4
21. Prior to Cleveland	3.50	5	4.10	0.60	17.2
Average for 21 blocks	$19.75	7	$20.60	$0.85	4.3

* Investigation by Thomas A. Polleys reproduced from 4 Wisconsin Railroad Commission Reports 501, 534.

oughs (or counties), where values would be falling in some localities and rising in others, was also examined. It was assumed that, in fixing the equalization ratio and in other features, the usual annual contests between taxing districts and between counties to get advantageous results are not lacking and that each of the contesting parties tries to put up the best possible support for the arguments made.

In connection with both local assessments and the support of appearances annually before the State Board of Equalization, the Commissioners published comparisons of sales considerations and assessments, beginning with the Report for 1913 and continuing to that for 1920, when the post-war revisions occurred. The following statement appears in the 1916 Report (p. 5):

"For several years past there have been printed in this report a table of the sales for the preceding year showing the consideration when known with the assessed value of the same property and the ratio between the assessed value and the stated considerations. This table has been presented annually to the State Board of Equalization. Objection is made by those who desire to prove that assessments of real estate in the City of New York are below full value, and that there are included in the list foreclosure sales, which often indicate a lower value for the property than it actually has. On the other hand, there are among these transfers sales of property under such circumstances that the price paid is in excess of the ordinary market value. The evidence indicates that the assessments of real estate in this City are at full value."

These figures appear to be compiled by units of individual assessment sections; in the 1913 Report is the comment: "A tabulation of the sales by sections shows a remarkable uniformity." These separated figures for a single section are not available.

In the same year (1913) in which the Commissioners began the publication of comparative sales data, the *Record and Guide* (the Manhattan real estate journal) undertook statistical studies along similar lines; and with some interruptions these have been carried forward to the present time. This material consists of weekly cumulative comparisons of available true considerations and assessed valuations for the Borough of Manhattan throughout the year, with an annual summary published in the first issue of the new year. Because of the high standing of this source, the ratios derived from its annual cumulative comparisons merit special attention. From necessity the number of cases with true consideration shown is a minor "sample" or fraction of the total number of conveyances in any year. The proportion of total number of conveyances covered as shown in the *Record and Guide* statistics in the 10 annual summaries available ranges from a maximum of about 16% in 1919 to a minimum of 4% in 1928, and averages 8%.[11] The percentages gradually fall from 13% in 1913 to 4% in 1928, indicating some modification of the basis of selection or classification (with possibly some increasing reluctance to disclose the true consideration). The percentages of assessed values of those properties for which true consideration was known to the assessed values of all properties sold (totals being known for both) run somewhat less than the above percentages based on numbers of properties.[12]

To assay this sample, the ratios derived from the *Record and Guide* annual cumulative totals are shown in the upper chart of Chart V in association

[11] Of 116,316 total conveyances in the 10 years summarized, 9,337 are classed as having the true consideration available.

[12] In all 10 years, in round figures, $490,000,000 assessed value total, for cases classed as known, out of $8,670,000,000 assessed value of all conveyances (or 6%).

with the published equalization ratios for the Borough of Manhattan. The sharp surge downward in the sales ratios, from 1915 to the "low" in 1926, with the rebound upwards in 1928, suggested the lower chart in which are also shown local factors believed to be related to effect or cause in this movement. Evidence thus noted of a recurring saw-tooth cycle gives interest in venturing into the period before 1912 for which some, though meager, support was traced. The forecast to another "high" (in the upper chart), within a few years, seems fairly clear. The corresponding ratios published in the Commission's annual reports (1913–1920) (each for the preceding year's sales) are not on a uniform basis throughout.[13] As far as they can be brought to like terms, they show a similar movement to that indicated in this assay, though less marked.[14] The ratios from both these sources relate to sales of real estate in general; so far as known no separation has been made for land only.

One of the related local factors shown on Chart V is the total annual cost of building construction in Manhattan during a series of years, reaching a peak and giving a hint at overtaking the wartime shortage, in 1925. Referring to the City of New York as a whole, the following is said in the Lehman Committee Report of 1928[15] on phases of real estate assessments in recent years:

". . . It is obvious that in recent years assessments have been increasing at an unprecedented rate. The main cause is almost certainly the undersupply of buildings accumulated during the war years. The assessment increase has come chiefly in building rather than in land values. In 1905 land values made up approximately three-fourths of the assessment roll. Today they are slightly less than one-half."

In Manhattan Borough alone the land made up 84% of the whole in 1904, 67% in 1915, 56% in 1928; in Assessment Section No. 5: 81% in 1904, 69% in 1915, 61% in 1928; and the Lewis studies, including both land and improvements, indicate that in the Grand Central locality alone the proportion of land to the whole dropped from 70% in 1904 to 54% in 1926.

To overcome the handicap of having only a scant fraction of conveyances showing true consideration in deeds, repeated attempts have been made to enact a law requiring this information to be shown, in the belief that if all were shown no particular attention would be attracted by any one of them except the very large considerations. Real estate men fear that the figures would be followed slavishly, and have uniformly brought pressure to bear against these proposed laws. The Commission has endeavored to combat the misuse of sales figures when known.[16]

[13] The Commission's published review of sales considerations embraced 11,436 sales with an aggregate consideration of $608,275,876 for the period from 1912 to 1919, inclusive. For the years 1917 and 1918 the sales used are totalled under three heads—"voluntary," "executors," and "foreclosures"; the ratios charted in these two years are shown both with and without the "foreclosure" cases, the latter being the lower points in the upper chart.

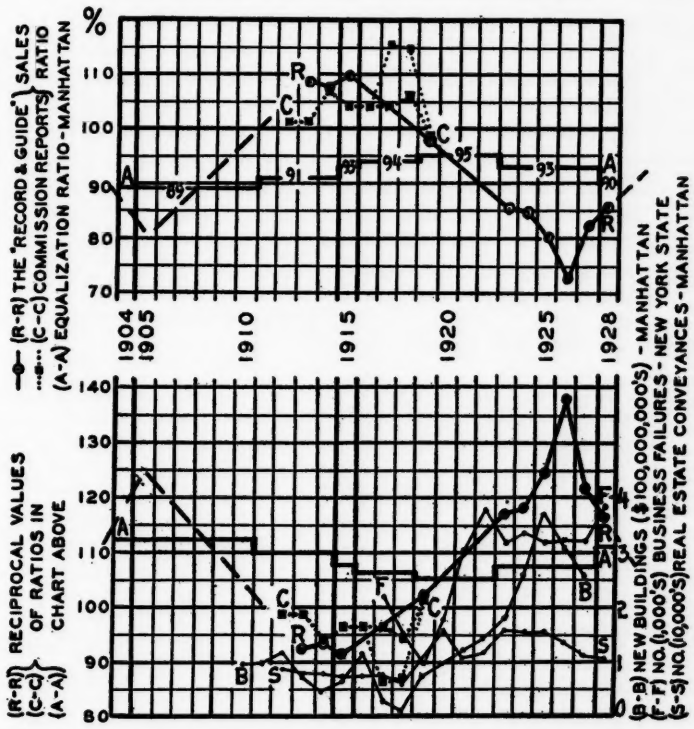
[14] The Commission ratios for years following 1920, prepared in part for submission to the State Equalization Board, were not available.

[15] Herbert H. Lehman and others, *The Finances and Financial Administration of New York City*, New York: Columbia University Press, (1928), p. 349.

[16] "The evidence furnished by sales of real estate as to the actual value of property is, from the nature of the case, always imperfect, because no particular sale is conclusive evidence of anything except that the minds of two contracting parties met at a certain point. The instructions to deputy tax commissioners for the assessment of real estate have always made it clear that no particular sale is to be regarded as conclusive evidence of value. The law requires an assessment 'at full value.' 'Full value,' however, is generally a smaller sum than the price asked for any particular property. It is generally the sum a seller can obtain in a reasonable time on ordinary terms. The sum for which property may have been sold at a forced sale is seldom equal to the full

(Footnote 16 continued on page 163)

CHART V. RATIO OF ANNUAL TOTALS, ASSESSED VALUE TO CONSIDERATION, REAL ESTATE SALES IN MANHATTAN BOROUGH, NEW YORK CITY, AND RELATED DATA.



The Commission in connection with its latest publication of conveyance comparisons[17] forecasted the upward movement in assessments which followed shortly:

"For the year 1921 there must be a considerable increase in the assessed valuations of real estate in the City of New York due to the very large appreciation in values of property indicated by recent sales and the increase of rental values of property . . ."

The speeding up in the rise of land values alone following this forecast is seen in the

(Footnote 16 continued from page 162)

value of the property. At the same time prices paid at forced sales are evidences of value, and should be taken into account in determining assessments. On the other hand, prices paid for the last lot comprising a parcel, when that lot was regarded by the purchaser as necessary to complete an area desired for a particular improvement, would not be conclusive as to the value of the particular parcel, nor would it be a standard by which to determine the price of the remainder of the parcel. It would be evidence of value, and the aggregate price paid for all the parcels in making up the plot might be good evidence of the value of the plot. Often, however, the value of the plot as a whole when the various parcels comprising it have been assembled, would be greater than the price paid for the various parcels. In view of these facts, it must be evident that the consideration expressed in sales as a standard of comparison for assessments must be examined with care. Assessments should be so made as to obtain a proper relation to all the lots in a block, and in like manner each block should be valued in relation to all the blocks in the City. The sale of particular lots not in harmony with assessed values should not be permitted to disturb the equality of the assessments of all parcels similarly situated." *Report*, 1913, pp. 6ff.

[17] *Report*, 1920, p. 8.

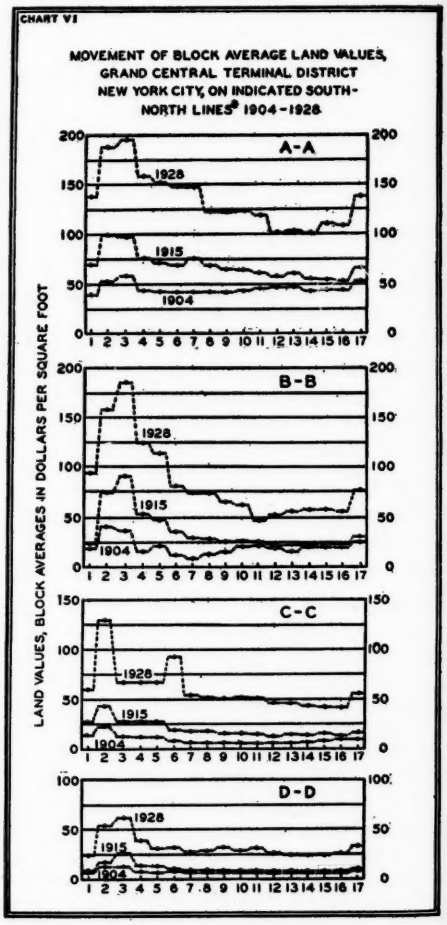
percentages of totals for the years stated, based on 1904 as 100%: For Manhattan Borough: 1910, 98.8%; 1915, 108.4%; 1920, 104.2%; 1925, 121.6%; 1928, 151.1%. For Assessment Section No. 5: 1910, 101.3%; 1915, 115.3%; 1920, 120.4%; 1925, 140.6%; 1928, 207.7%. The local conveyance investigations by the Commission are still made and submitted annually to the State Board of Equalization as in former years.

III. *Local Land Values in the Grand Central District*

This review of the base values published in the *Supplement* to the *City Record* for the three test years chosen for the purposes of this survey, led to the adoption of those figures in the calculation of tentative results. In the examination of various phases of the practices and safeguards pursued in the local assessment work, an effort was made to single out the means for making possible adjustments in the results, which would bring them closer to the basis of value adopted for the comparisons. One such element claiming attention has already been mentioned, namely, that "assessments are as a rule fully a year old and were based on the evidence of the preceding year;" a condition found in all valuations conducted for tax purposes. Various tests were made of the rates of lag in particular years and these were taken with the trend of other factors found, some of which were of offsetting effect.

It was noted that there was in general an upward movement in total assessed values on lands for the entire period represented by the three test years, notwithstanding the fact that a downward reaction followed immediately after the base year, 1904.[18]

The annual increase in totals for lands in Section 5 around the year 1915 was 2 to 3%; and just previous to 1928, from 10 to nearly 20%. The latter figures point to what must have been going on in the limited locality here under survey, an area of exceptionally rapid rise in values in recent years. After giving weight to these and to other points

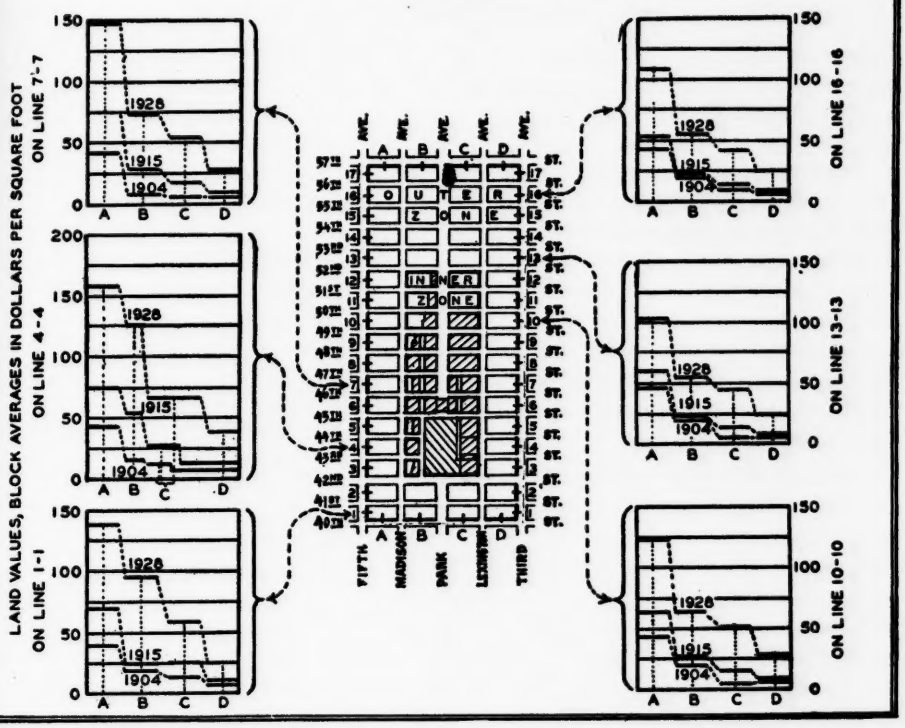


* For exact position of lines see diagram on Chart VII.

[18] These fluctuations were as follows: For Manhattan Borough: 1904, 100%; 1906, 88%; 1908, 96%; 1910, 99%; 1911, 106%; for Assessment Section No. 5, of shorter duration: 1906, 96%; 1908, 99%; 1910, 101%. A similar recession of minor amount in land totals in Manhattan as a whole from 1916 to 1920, inclusive, did not occur in Section 5.

CHART VII

MOVEMENT OF BLOCK AVERAGE LAND VALUES, GRAND CENTRAL TERMINAL DISTRICT, NEW YORK CITY, ON SELECTED EAST-WEST LINES 1904-1928



brought out in review before finally scanning the estimates, the conclusion was reached that the results taken as a whole fairly represent conservative minimum values. As already noted, the assessment level for the year 1904 was distinctly higher than in earlier years and somewhat above that in the years immediately following. For 1915 it is believed that few if any of the block average values would be less than the results here shown. For 1928, although a few such values may be lower than those shown, values in individual cases may range as much as 10% higher.

In Table III are shown the average values per square foot for separate "blocks" or rectangles embraced between adjoining streets and avenues, set up for each of the test years, in four tiers or "ranges" south to north from 40th Street to 57th Street (with ranges contained between consecutive avenues west to east: Fifth, Madison, Park, Lexington and Third Avenues). The block average results[19] are also shown (Chart

[19] In connection with the "block average" unit here taken, it is of interest to cite the maximum unit value for a limited locality found in any city. The average for the locality of The Bank in the City of London is around £100 (say $500) per square foot. The comparable maximum in the business area of Lower Manhattan is reputed to be somewhat less than this figure.

VI) in "value profile" form for each of the south-north ranges, and on Chart VII at the same dollar scale in six typical west-east "cross-sections." The lines on which these profiles and sections are taken are indicated (Chart VII) on the small map of the area. The map also shows the approximate limits of the area embracing the Grand Central Terminal and the air rights structures. At the foot of Table III is shown the upward movement of average values, taken by ranges as a whole, with corresponding percentages and percentage increases over the initial test year (based on 1904 as 100%) for the period reviewed.

Table IV is a summary of results grouped to indicate the period-movement of the land value totals taken for each of several localities with the area limits so chosen as to reflect comparative shadings of influence according to varying proximity to, or remoteness from, the zone of intensive air rights development. These grouped totals are set up as: (1) the "inner air rights zone," and (2) the "outer zone," which together make up (3) the "Grand Central District" as defined in the present survey (See footnote, Table IV). The totals for Manhattan Borough and for Assessment Section No. 5 are given for purposes of comparison. The contrasts are shown in percentages for each area (based on 1904 as 100%); and finally, in a rising scale of percentage increases which disclose the trend sought for.[20]

[20] In the study of "Land Values" within the New York Region, by Harold M. Lewis and associates (p. 44) results obtained for the Grand Central locality, taking limits somewhat different from those used in the present review, showed for the year 1926 a gain in total land values above 1904 of 244% as against a gain for

(*Footnote 20 continued on page 167*)

TABLE III. MOVEMENT OF BLOCK AVERAGE LAND VALUES PER SQUARE FOOT ALONG SOUTH-NORTH LINES, GRAND CENTRAL TERMINAL DISTRICT, NEW YORK CITY, 1904, 1915 AND 1928.

No. From To	Between 5th Ave. and Madison Ave. (A–A)			Between Madison Ave. and Park Ave. (B–B)			Between Park Ave. and Lexington Ave. (C–C)			Between Lexington Ave. and 3rd Ave. (D–D)		
	1904	1915	1928	1904	1915	1928	1904	1915	1928	1904	1915	1928
1. 40th St.–41st St...	$40	$70	$138	$20	$25	$94	$14	$27	$59	$8	$11	$24
2. 41st St.–42nd St...	52	99	188	40	73	159	22	44	130	13	18	54
Grand Central Station Block.....	.....	.....	.....	.....	.....	.....	12	27	67	.....	.....	.....
3. 42nd St.–43rd St...	58	97	195	37	90	186	.....	.....	.....	12	27	62
4. 43rd St.–44th St...	43	75	158	17	53	125	.....	.....	.....	8	15	40
5. 44th St.–45th St...	42	71	152	21	48	114	.....	.....	.....	7	14	36
6. 45th St.–46th St...	41	69	149	12	36	81	7	19	92	8	10	32
7. 46th St.–47th St...	41	76	148	9	30	73	7	18	53	7	9	27
8. 47th St.–48th St...	42	69	122	13	29	73	6	18	52	8	9	28
9. 48th St.–49th St...	42	65	122	16	26	66	7	16	51	7	9	31
10. 49th St.–50th St...	43	63	124	22	26	64	6	16	50	7	8	28
11. 50th St.–51st St...	46	61	120	22	25	47	6	15	51	7	9	30
12. 51st St.–52nd St...	47	58	100	20	22	53	6	12	46	7	8	26
13. 52nd St.–53rd St...	47	60	103	19	23	56	6	15	46	7	8	24
14. 53rd St.–54th St...	43	55	101	21	22	58	7	15	43	7	8	25
15. 54th St.–55th St...	44	55	111	21	24	57	8	15	43	7	8	25
16. 55th St.–56th St...	43	52	109	21	23	56	9	15	41	8	8	25
17. 56th St.–57th St...	53	66	138	26	29	76	11	17	57	8	10	34
Average.....	45.1	68.3	133.9	20.6	33.1	79.5	9.2	20.4	60.9	8.1	11.9	32.5
Per Cent. of 1904 (Base)	100.0	151.5	297.0	100.0	160.5	385.0	100.0	221.0	660.0	100.0	147.0	401.0
Per Cent. Increase over 1904.....	.....	51.5	197.0	.....	60.5	285.0	.....	121.0	560.0	.....	47.0	301.0

TABLE IV. SUMMARY OF RESULTS: INFLUENCE OF RAILWAY TERMINAL AIR RIGHTS DEVELOPMENT ON LOCAL LAND VALUES, GRAND CENTRAL TERMINAL DISTRICT,* MANHATTAN BOROUGH, NEW YORK CITY, 1904–1928.

Year	Item	Manhattan Borough (M)	%	Assessment Section No. 5 (S)	%	Grand Central District (D)	%	Outer Zone—Grand Central District (O)	%	Inner (Air Rights) Zone—Grand Central District (I)	%
1904	Base: Total Value	$2,936,856,387	100.0	$559,460,410	100.0	($115,995,750)	.....	($97,067,750)	.....	($18,928,000)	.....
	Base: Average Value per Sq. Ft.	.....	.....	.....	.....	20.48	100.0	23.36	100.0	12.56	100.0
1915	Total Value	3,184,441,505	108.4	645,067,380	115.3	(187,033,725)	.....	(146,273,725)	.....	(40,760,000)	.....
	Average Value per Sq. Ft.	.....	.....	.....	.....	32.84	160.3	35.20	150.7	26.48	210.8
	Excess Increase (%):										
	Over (D)—Grand Cent. Dist.	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.5
	Over (O)—Outer Zone	.....	.....	.....	.....	.....	.....	.....	.....	.....	60.1
	Over (S)—Ass'm't Sec. 5	.....	.....	.....	.....	.....	45.0	.....	35.4	.....	97.5
	Over (M)—Manh. Boro.	.....	.....	.....	.....	.....	51.9	.....	42.3	.....	103.4
1928	Total Value	4,438,318,085	151.1	1,162,208,200	207.7	(434,147,400)	.....	(316,490,400)	.....	(117,657,000)	.....
	Average Value per Sq. Ft.	.....	.....	.....	.....	76.02	371.1	79.30	339.5	68.40	544.6
	Excess Increase (%):										
	Over (D)—Grand Cent. Dist.	.....	.....	.....	.....	.....	.....	.....	.....	.....	173.5
	Over (O)—Outer Zone	.....	.....	.....	.....	.....	.....	.....	.....	.....	205.1
	Over (S)—Ass'm't Sec. 5	.....	.....	.....	.....	.....	163.4	.....	131.8	.....	336.9
	Over (M)—Manh. Boro.	.....	.....	.....	.....	.....	220.0	.....	188.4	.....	393.5

* "GRAND CENTRAL DISTRICT" embraces: (40th to 57th St.) and (3rd to 5th Ave.).
"INNER AIR RIGHTS ZONE": (42nd to 53rd St.) and (Lexington to Madison Ave.).
"OUTER ZONE": All blocks in "GRAND CENTRAL DISTRICT" outside "INNER ZONE."

These results, centering in a single important index of value, illustrate the obvious impulse given both directly and indirectly through the skillful and sweeping utilization of air rights in a railway terminal so situated that these once fallow spaces, when reclaimed in fullest measure, meet an intense and rising local demand. In particular, the survey discloses (1) the great gain of the New York Central and the New York, New Haven and Hartford railroad companies in securing a self-supporting terminal in a metropolis like New York, accompanied by by-products of enormous value; and (2) the great gain of the public through the restoration of its street system in that vicinity and the enhancement of realty values which have contributed a share of the tax burden—all made possible by the utilization of air rights.

(Footnote 20 continued from page 166)

Manhattan Borough in the same period of 26.4%. A similar comparison (p. 45) for the "Pennsylvania Terminal District" (approximately from 7th Avenue to 10th Avenue and from 30th Street to 34th Street) gave an increase to 1926 in the land totals of 133% as against the increase for Manhattan of 26.4%.

APPENDIX A

Extracts From the "Introduction" to the 1928 Tentative Land Value Map Book, Department of Taxes and Assessments, New York City, With Comments on Early Experiences in the Use of the Land Value Map System (1909); and Extracts From Annual Report (1913) of the Commissioners.

"*Purpose of Publication.* For a number of years the Department of Taxes and Assessments has endeavored by every practicable means to inform the public as to the methods of assessment, in order that those interested in assessments may criticise the work of the Department intelligently, and may aid the Department by suggestions as to methods and by their knowledge of values. To carry out this plan of publicity the Department has for several years caused to be published maps showing the unit value of land on every street, on every square and on every acreage tract in the City of New York.

Interest in the publication was lessened by the fact that it represented a record of the past as to which any action was foreclosed. In order that interest in the publication might be increased, it was decided in 1912 that the publication should be made at the same time that the annual record of assessed valuation is open for public inspection and correction. The maps this year

are tentative, just as is the record of assessments, which are open to correction by the Commissioners, either upon their own motion or upon application by interested persons.

"*What the Maps Are.* These maps represent the first stage in the assessment of real estate made by the deputy tax commissioners. During the year they are engaged in studying their districts and ascertaining all facts material to the determination of value. When they start upon an assessment they first determine from all the accumulated data, in the light of their experience, the value of land in each block in their districts. On a map prepared for the purpose they set down the value per front foot of lots one hundred feet deep, of normal size and on a level with the grade of the street. This is the unit value and is subject to modification when the assessment of any particular lot is derived from it. The value is modified if the lot is above grade, or if it is below grade, or if the lot is so narrow as to preclude its appropriate improvement. On the other hand, there is a modification if the lot is larger than a normal lot when the lot is so situated that it requires for appropriate improvement a building too large for a lot 25 feet x 100 feet . . . Where a parcel is of irregular shape allowance is made for the irregularity. The unit values do not in any case represent the value of a corner, and in assessing a lot subject to corner influence allowance is made for that advantage . . . [Description of method of valuing water front properties is here omitted.]

"*Methods of Arriving at Land Values.* The deputy tax commissioners are aided in their work by the department, which furnishes all sales where the consideration is stated in the deed, including auction sales, and these sales are kept permanently on cards where they are open to the inspection of the deputies. In the boroughs of Manhattan and The Bronx, the deputies are furnished with a copy of the *Record and Guide*, which gives all sales, mortgages and recorded leases. In the other boroughs, department searchers abstract from the records of the Register or the County Clerk the data furnished by conveyances, mortgages and recorded leases. These records are put at the disposal of the deputies in the most convenient form. In addition to the facts obtained from the records, the deputies are expected to obtain from real estate brokers and others all the facts in relation to sales and leases and rentals which can be obtained by careful inquiry. As a rule, they are singularly successful in this, and frequently have recorded in their field books the actual prices paid for land, which are not supposed to be known to anyone other than the parties to the transaction. While asking prices can very rarely be regarded as the measure of value, they are nevertheless evidences of value, and asking prices are generally recorded on the deputies' field books.

"From all this evidence of value the deputies determine the value per front foot on each street. The exhibition of the values on a map tends to correct inequalities and mistakes which might otherwise be made in their determination of the value of particular streets. When the values are shown on the map it is apparent that they must all bear a reasonable relation to each other."

[The portion omitted includes rules or processes for guidance in arriving at the values of different parts of a lot—the well-known Judge Hoffman rule (1866)—and also an approximate method of determining the value of lots greater or less than the standard depth of 100 feet adopted for the frontage figures shown in the valuation maps.]

"Owners of real estate, brokers and appraisers are invited to cooperate with the Department in order that this publication may be of the greatest use. The Department will be grateful for criticism, and especially when critics accompany their suggestions with evidence to prove their assertions. It should be borne in mind that the Department must be prepared to sustain assessments in court."

[In the Annual Report (p. 7) for 1913—the year following that in which "it was decided that the publication (of Land Value Maps) should be made at the same time that the annual record of assessed valuation is open for public inspection and correction"—the benefits derived from this plan are thus described:] "The evenness and equality of the assessments of land values by the Deputies in the 75 districts with the aid of the Land Value Maps, which show the units of value on every side of every block throughout the City, is very strikingly illustrated by the character of the applications for reduction of the assessed value of property submitted by property owners. During the last three years there has been practically not one single case where inequality between the assessments of neighboring lots has been shown or even alleged. In most cases the complaint has related to the valuation of the building and when complaints have been made that the land value was too high it has almost invariably been the case that the complaint affected a very considerable area . . . When the assessment is really too high it is generally because the building has been assessed without proper regard to a change in the character of the neighborhood, or to conditions affecting the interior of the building not apparent from the outside. When the land is overvalued it is generally because of a downward change in the conditions of the neighborhood [here citing an instance of this class in the previous year]. Even in this section it is believed by competent real estate men that the depreciation of the section is largely due to the failure of owners to replace their obsolete buildings with modern improvements. The tenants of this district were induced to move by the better accommodations offered them elsewhere. In such a case any complaint is general notice to the Department that the whole section needs careful scrutiny and that the reduction in the particular case will involve reduction in many adjoining cases."

FINANCING FLOOD CONTROL MEASURES IN THE MISSISSIPPI RIVER VALLEY

By H. L. LUTZ

THE question of how to finance the cost of permanent works designed to control the flood waters of the Mississippi Valley has, obviously, more than one answer. There are various possibilities, and the method of financing will depend on the cost of the plan that is adopted and on the resources of the agencies that are to undertake it. In one sense, discussion of this question is academic, since Congress has already determined the federal policy by passing the Jones-Reid Bill, in which a plan of construction was approved and a substantial appropriation made for the work. The only course that is feasible, in this brief paper, is to indicate some of the general considerations that would be appropriate in dealing with a problem of this type, and thus to afford a basis for passing judgment upon the program already adopted by Congress.

The factors involved in financing a project of the magnitude of the Mississippi River flood program are the following: (1) the cost; (2) the agencies which are to devise the plan and provide the funds; (3) the relative weight to be given to considerations of general welfare and to special local benefit resulting from this improvement; and (4) the sources of the funds, whether from loans or taxes. All of these matters, with the exception of the last, were freely and extensively discussed in the hearings conducted by Congressional Committees and in the House and Senate during the debates on the proposed flood control legislation. It will be impossible to review all of the arguments and evidence presented in the course of these hearings and debates, and this account will be confined to a short resumé of the outstanding features of a sound financial program.

The Cost. At this stage no one can say what the total cost of the flood control program will be. The magnitude of the 1927 flood and the extent of the losses caused by it emphasize anew the need of as thoroughly effective a plan as it is possible for engineering skill to devise. Further attempts at partial, incomplete or clearly inadequate measures are wasteful and should not be contemplated. The problem has been dealt with in piecemeal fashion too long already, and the job should be done right this time, whatever the cost may be.

The estimates of cost vary widely. The so-called Army plan, which excluded certain kinds of costs, would involve an expenditure, according to estimates, of about $296,000,000, while the plan of the Mississippi River Commission, which included some features not considered in the Army plan, would run to about $775,000,000. Congress appropriated $325,000,000 in the Jones-Reid Act, and it would probably occasion no surprise if the total cost should reach $500,000,000 or even more. If the total should reach this level of half a billion dollars, the Mississippi River flood control project would be the largest single engineering work ever undertaken in normal times by governmental agencies in the United States.

The Agencies. On logical grounds a distinction may be made between the agencies which should be responsible for the engineering plans, and those which should be responsible for furnishing the

funds. While the latter question only is of importance in a consideration of the strictly financial aspects of the case, the former has an indirect bearing, on the assumption that the tests of efficiency and economy are to be observed in an expenditure program of this magnitude.

With respect both to the plans and the sources of funds, there are various alternatives, although some of them were not, and should not have been, considered. It was assumed from the outset that whatever arrangements were finally to be made regarding the contributors of the funds, the responsibility for the plan of construction rested upon the Federal government. This assumption marks an important transition from the previous methods of dealing with the Mississippi River problem. It should not be inferred that heretofore the Federal government has ignored the Mississippi River. On the contrary, as early as 1879 the Mississippi River Commission was established, and the Act creating this Commission provided, among other things, for the following duties:

> "* * * to consider and mature such plans and estimates as will correct, permanently locate, and deepen the channel and protect the banks of the Mississippi River; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate trade, commerce, and the postal service; * * *."

Despite these impressive instructions for disciplining the Father of Waters, losses from floods continued to be a regular occurrence, and such plans as the Commission may have matured for dealing with the problem of surplus waters remained in the official pigeonholes. The Act of March 1, 1917 provided for further surveys and reports, and the Flood Control Act of March 4, 1923 appropriated $10,000,000 annually for a period of six years for aid in the construction of protective works, subject to various restrictions. Notwithstanding these evidences of interest and concern in the problem, the important share of responsibility for flood prevention and control measures remained a local matter, and this responsibility was discharged mainly by the construction of levees by local levee districts.

The success of a general scheme of flood control in the Mississippi River Valley depends so completely on federal initiative and responsibility in the preparation and execution of the engineering plans, that the Federal government's obligations on this score may be taken for granted. Congress has already given full recognition of this obligation by ordering the adoption of a certain plan of procedure. This assumption of federal responsibility does not bar states or localities from undertaking supplemental projects, although it would be obviously unwise for the states to plunge into large independent projects without first making certain that they will further the main objective.

The allocation of responsibility for the flood control program to the Federal government might be regarded as presumptive evidence in favor of federal assumption of the financial burden, in view of the questions that might possibly arise concerning the right of Congress to impose a burden on particular localities, and in view, also, of possible differences concerning the relative expense of alternative plans. With respect to the agencies that are to supply the funds, the discussion in Congress turned round the issue as to whether the federal treasury alone should provide these funds, or whether there should be joint federal and local support. Arguments for some degree of local support were, first, that

the burden on the central treasury would be thereby lessened, and second, that the obligation to contibute would automatically eliminate much of the local pressure for unnecessary or unduly expensive works. Local support has been required in the case of federal aid to highways, and local authorities are permitted, even invited, to contribute to other projects, such as construction of roads in the national forests, and the ordinary run of river and harbor improvements. The principle of local contribution was embodied in the Flood Control Act of 1923, and the administration pressed strongly for its incorporation in the legislation of 1928. The language of the Jones-Reid Act "straddles" the issue very neatly. This Act declares it to be the sense of Congress that the principle of local contribution is sound "as recognizing the special interest of the local population in its own protection, and as a means of preventing inordinate requests for unjustified items of work having no material national interest." This formal "recognition" is followed by the statement that the expenditures already made by local interests in the alluvial valley of the Mississippi River for protection against floods, estimated at $292,000,000, are accepted as full discharge of responsibility to contribute, and no local contribution is to be required to the project adopted by the Act. Just how inordinate requests for unjustified items of work will be eliminated by the fact that during the past 60 years or so these local interests have spent so much money on river control is not made clear.

The Act states, at the same time, the fundamental basis of federal support of the flood control project, and in the light of this statement the previous references to local contribution become still less significant. The reasons for federal financing are put forth in the following language:

> "* * * in view of the extent of national concern in the control of these floods in the interest of national prosperity, the flow of interstate commerce and the movement of the United States mails; and in view of the gigantic scale of the project involving flood waters of a volume and flowing from a drainage area largely outside the states most affected, and far exceeding those of any other river in the United States, no local contribution to the project herein adopted is required."

Here is a clear recognition of the national scope of the problem, although the drainage basin of the Mississippi River occupies but 31 states. The above statement suggests also the difficulties involved in an accurate application of the principle of local benefits to the particular case under discussion, although it seems clear that Congress had in mind entirely too narrow a conception of the nature and scope of the benefits arising from such an improvement.

General vs. Local Benefits. Since the question of local participation was so important in the discussions, and was so definitely referred to in the legislation as it was enacted by Congress, it will be well to consider the degree to which it could have been applied equitably in this instance.

It seems apparent, in the first place, that the conception of benefit to be derived from the flood control improvements was so narrow and restricted that the attempt to apply it must have resulted in serious injustice. The Jones-Reid Act declares that the principle is sound and recognizes expenditures made by local interests in the lower section of the Valley for levees and similar works as an adequate discharge of their obligation. The Act elsewhere refers to the special interest of this population in its own protection, i. e., against losses by

floods, and to the possible inclination of this section to demand unjustifiable expenditures. The benefit from flood control measures was evidently considered to be localized in the lower valley, and not elsewhere. To be sure, the language quoted above indicates that nation-wide benefits are to be expected from a prevention of disastrous floods, and thus federal assumption of the whole cost is justified. In so far as a theory of local benefit was expressed, however, it was that the lower alluvial valley only was the locus of such benefit. As will be seen, some elements of cost are thrown back upon the local districts in which the actual construction is located, despite the immense sums which these districts are admitted to have contributed already.

As a matter of fact, the actual demonstrable benefits, not of a general and nation-wide character but of a distinctly local character, to be derived from more effective measures for the control and disposal of flood waters extend throughout the water-shed basin. The problem is fundamentally one of drainage and of disposing of surplus water accumulated in vast quantities as a result of excessive precipitation. The condition of excessive rainfall was not confined to the lower valley. It was a general condition. The water that caused the trouble came from every part of the drainage basin. The disposal of this surplus water is a joint responsibility of all parts of this basin. An adequate system of disposal would benefit the lower valley by preventing or minimizing losses; but it would be no less a benefit to the other sections within the Mississippi drainage basin, for which this service of a more orderly and expeditious removal of surplus surface waters is performed. If the principle of local support on account of local benefits is sound, it can only be equitably applied by spreading the local assessment over the entire area which receives the benefit.

This problem has frequently been encountered and dealt with on a smaller scale. Cities must make provision for disposing of surplus storm waters, and this is done by a system of storm water sewers. In the case of municipal work of this character, the improvement is financed usually by means of a special assessment on land benefited by the improvement. The district deemed to be benefited by such an improvement is not simply the lands of lowest elevation, most subject to overflow without the drainage sewer system, but all land in the drainage basin. The most equitable method of distributing the cost of a municipal storm water sewer is according to area.[1]

The State of Ohio was confronted by this problem after the disastrous flood in the Miami River Valley in 1913. An Ohio law of 1914[2] authorized the formation of districts, which thereupon became political subdivisions of the State with power, acting through a board of directors, to plan and execute works for prevention of floods, conservancy of waters, and similar purposes. The cost of such projects could be met by bond issue, for the interest and sinking fund charges of which a tax could be levied on all land deemed to be benefited. The appraisers who were to make the assessment of benefits were not restricted to the district as originally outlined, but could assess benefits to outlying lands and the court of common pleas was empowered to include such lands, if, upon hearing, they were found to have received a benefit.

[1] National Municipal League, *Special Assessments*, 2nd edition, pp. 13, 14.

[2] 104 Ohio Laws 13.

The limitations imposed by the federal type of government prevent the proper application of the benefit principle in this case. Properly applied, it would have involved a distribution of the burden of the improvement over the entire drainage basin served by the Mississippi River system, on some basis of assessment of benefits and damages appropriate to the scale of this system. When the immense rainfall in almost every part of this drainage basin during the months preceding a flood is considered, it verges on the ridiculous to assume that the overflowed lands of the lower river valley are the only lands to be benefited by the construction of works designed to facilitate the discharge into the Gulf of the immense volume of surplus waters accumulated from every part of this basin.

In the correct sense, therefore, the benefit principle is not really applicable in this case, despite the declaration of its soundness in the Jones-Reid Act. Any attempt to apply it by exacting a contribution from residents or property owners of the lower valley alone would have been unjust and inequitable, since it would have meant an assessment upon only a part, a small part, of those who were really enjoying the benefits. Congress has no constitutional power to levy a special assessment according to the benefits conferred throughout the Mississippi River basin, nor do any other means exist, whereby the cost of the project, or any part thereof, could be distributed among the 31 states that are, in some degree, involved. The only alternative, therefore, is federal assumption of the cost, and this, fortunately, was done in the Jones-Reid Act, with certain exceptions to be noted.

The exceptions referred to are two. (1) The states or the levee districts are to give assurances satisfactory to the Secretary of War that they will maintain all flood-control works after completion, except controlling and regulating spillway structures, but including special relief levees. Maintenance is defined to include, normally, cutting grass, removing weeds, local drainage, and minor repairs on the main stem river levees. (2) The states or levee districts are to provide all rights of way for levee foundations and levees on the main stem of the Mississippi River from Cape Girardeau, Missouri, to the Head of the Passes, near the mouth. Section 6 of the Act provides that funds may be spent on flood control projects on tributaries of the Mississippi south of Rock Island, so far as these are affected by backwaters, up to $10,000,000, provided that the states furnish the right of way, pay one-third of the cost, and maintain the works afterward. Since the alluvial lands of these tributaries receive the overflow from back waters, they would in a sense, be benefited by control works designed to prevent such overflow, but in another sense this is simply another illustration of the extremely narrow conception of benefit which was prevalent in the whole discussion.

Sources of the Funds: Loans vs. Taxes. Assuming that it is now the intention of the Federal government to proceed with the construction of works, the magnitude and character of which will serve, so far as engineering skill can make possible, to dispose of surplus flood waters in an orderly fashion without the ravages that have been suffered in past floods, and assuming also that the quality of construction gives, in the main, a substantial degree of permanence to such works, it is apparent that this undertaking will be of an emergency or extraordinary character

which would justify resort to loans as the source of the funds. Had the narrow conception of benefit been applied, and the proposal that was at one time advanced to require a local contribution of 20% of the cost prevailed, the states or levee districts in which the works were located would have been equally justified in borrowing the funds. Indeed, they would probably have found such course necessary, although some of the levee districts are already so heavily bonded that they might have encountered some difficulty in marketing their bonds.

While the nature of the improvement, from the standpoint of permanence and of its non-recurring character, would afford ample justification for resort to loans, the choice between loans and taxes will depend in part on the relation of the total expenditure to the available resources of the Federal government.

The only comparable undertaking by the Federal government in recent history is the construction of the Panama Canal. This work cost about $400,000,000, and the period of construction covered some eight or nine years. The total ordinary receipts of the federal treasury at this time, in round numbers, ranged from $562,000,000 in 1902 to $675,000,000 in 1910. It was natural to conclude that an extraordinary outlay of $400,000,000 might involve an undue strain on the federal revenue machinery, and Congress wisely authorized the issue of bonds sufficient to cover the above cost. By a series of acts which were passed between the years 1902 and 1911, bond issues aggregating $420,000,000 were approved; but the par amount of the bonds actually issued under these various enabling acts was only $134,631,000 at average prices ranging from $102½ to $103½.

From this record it is seen that despite the extraordinary character of the project and the fact that Congress had authorized the administrative authorities to borrow the entire amount necessary for its construction, only about one-third of the cost of the Panama Canal was in fact met by means of loans. The remainder of the cost was met from current revenues. The long period over which construction was extended favored this policy.

The situation of the federal treasury at the present time presents certain important points of contrast with that of 25 years ago. In the first place, the whole scale of federal revenue and expenditure has risen tremendously. The federal revenue system is much more flexible and productive now than it was then, largely on account of the appearance of the income tax in the federal tax program. The ordinary receipts for the fiscal year 1928 were in excess of $3,800,000,000, a sum greater than the aggregate ordinary receipts of the whole period 1904 to 1909 inclusive. While the expenditures chargeable against ordinary receipts have likewise increased tremendously, the net result is and has been in recent years a handsome treasury surplus. The probable cost of the flood relief program, say around $500,000,000, would represent a much smaller part of the current annual budget than the cost of the Panama Canal represented in relation to the annual budgets of the years during which it was under construction. From this point of view, it would apparently be an easy matter to meet the cost of this project, great as it is, from current revenues as construction proceeds, without resort to loans.

On the other hand, the federal administration of 25 years ago had no problem of debt management and re-

demption such as confronts the treasury at the present time. The debt of that time was small, the interest charge light, and the maturities were all at far distant dates. At the present time a large debt is still outstanding, and the maturities of the next few years present some delicate problems of policy. Use of half a billion dollars for flood relief during the next three to five years would mean that a corresponding amount of short-term debt would require to be refunded instead of redeemed from treasury surpluses. This assumes, of course, that the present level of federal taxation will produce about the same yield as at present. An era of unprecedented prosperity would possibly produce unprecedented treasury surpluses, and so invalidate this statement. Assuming a certain stability of the federal revenues, it is apparent that, whether the flood program is financed from the treasury surplus and a larger amount of the early maturing treasury certificates and notes are refunded, or whether a flood relief loan were issued while the treasury surplus was applied to debt redemption as before, the effect is the same—the rate of debt retirement is checked. Maintenance of the present rate of debt retirement, while assuming the additional burden of the flood relief program in the current budget, would probably mean an increase of federal taxation, unless Heaven sends a prosperity greater than any yet experienced. Prophecy is always rash, but the postponement of the redemption of certain portions of the existing debt is so much easier than the increase of taxes that use of the former method may be confidently expected. This is tantamount to a resort to a loan, notwithstanding the appropriation for cash outlay in current budgets. The nature of the work justifies this policy, and failure to advance federal taxes by an amount sufficient to provide the flood relief funds and maintain the former rate of debt redemption does not expose the Federal government to adverse criticism.

Summary

It appears that the Federal government should assume responsibility for the engineering plans, and since a correct application of the benefit principle is utterly impossible, it should assume the entire cost of the Mississippi River flood control program. The extent of the national interest in prevention of such disasters affords further justification of this policy, if it were needed. In view of the volume of short-maturity debt now outstanding, and in view of the practice followed in recent years of devoting treasury surpluses to debt redemption, the addition of this burden to the budget will tend to slow up the rate of debt redemption, and will thus be equivalent to financing the cost by means of loans, unless definite increases are made in federal taxes for the purpose of meeting this cost. The extraordinary character of the work justifies the use of public credit for this purpose.

THE RELATIVE IMPORTANCE OF WEIGHTS IN STREET RAILWAY TRACK CONSTRUCTION INDEXES

By BANCROFT HILL

IN the November, 1927, issue of the *Journal of Land and Public Utility Economics*, Mr. Paul Jerome Raver presented a very interesting discussion of the construction and use of cost indexes in public utility valuations. He based his discussion on a construction cost index of street railway track, which he had developed with great care. Mr. Raver's investigations were apparently among street railway systems which had not changed in character of track construction to any great extent during the past 15 years. He states that on such a system the abandonments and additions would tend to maintain the same general average or type of construction and that, if they did not, then the index would not apply and the weights used in constructing the index would have to be recomputed.

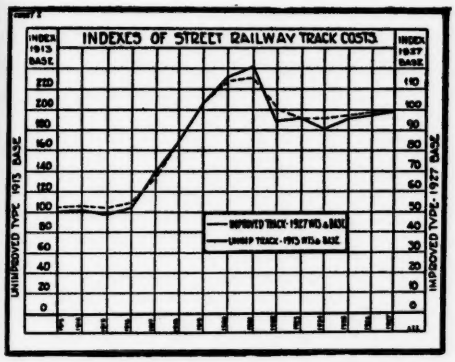
Owing to the growing use of construction indexes in appraisal and valuation work, the following study of the effect of the variation in types, carrying with it, of course, a corresponding variation in weights, may be of interest. This study was based on data available from the valuation and actual history of cost of one of the largest street railway systems in the United States. It was made before Mr. Raver's article appeared, by methods in some cases quite materially different from those indicated in his article, but it will show two interesting facts in connection therewith: (1) a rather remarkable confirmation of Mr. Raver's results; and (2) that, if the type of track does materially change, the difference in the resulting index will not be great.

In many cities the type of track has changed very decidedly in the last 15 years. In fact, few people realize that about 15 years ago in these cities a complete cycle of electric railway transportation came to an end and another cycle began. Fifteen years ago the old type of track, consisting of light tram girder rail on earth ballast, with cobble or granite block paving on sand and earth base, carrying a 17,000 pound single truck open or closed car with hand brakes, was giving way to the heavy grooved girder rail on rock ballast, with tie plates and an increasing number of treated ties, carrying a 45,000 pound semi-convertible car with airbrakes. Even the system of power generation and distribution was changing. The old direct current steam stations with heavy overhead feeders were giving way to central stations supplying current through underground conduits to substations. The paving was changing from cobble and granite block, and even oil and water bound macadam, on earth, at $.50 to $1.00 a square yard, to sheet asphalt and granite block on six-inch concrete base, at $4.50 to $7.00 a square yard.

In cities where this change took place, Mr. Raver's statement that the weights should be recomputed applies, and the following study shows the results of a comparison of the indexes derived from the two types of track. Consideration of paving has been omitted, as its inclusion would tend to complicate the problem without making any corresponding change in either the result or the methods, because, it must be re-

membered, that the index would concern itself with cobble then and cobble now, asphalt then and asphalt now, and no increase in cost due to cobble then and asphalt now.

The following is part of a study of indexes which was made to ascertain the effect of the use of these different typical sections of track. Chart I shows graphically the indexes of the two types of tangent, or straight, electric street railway track costs. The first is obtained by taking a section of what was considered to be typical construction on unimproved or dirt ballast, such as was largely used prior to 1913, and constructing an index for it based on 1913 as 100.


INDEXES OF STREET RAILWAY TRACK COSTS
INDEX 1913 BASE
INDEX 1927 BASE
UNIMPROVED TYPE: 1913 BASE
IMPROVED TYPE: 1927 BASE

The weights of this index are given in Table I and the index in Table II. Starting with a base of 100 in 1913, when that type of track was typical, it runs forward to an index of 198 in 1927, or within 1% of double the 1913 cost. A section of track was next selected which was considered typical for the present day, that is, a heavy grooved girder rail on six inches of broken stone ballast. The weights as of 1927 for this section are also shown in Table I, and the index in Table II. It was carried backward from 1927 as 100, to 1913, where it was only 6% more than half of the present day value. It will be seen, therefore, that as far as track is concerned, it makes relatively little difference whether the weights are those of the old light track, typical of 1913, or those of the heavy improved type of the present day. Nor do we find any great difference anywhere along the series of years separating the two extremes.

TABLE I. WEIGHTS USED IN INDEXES OF COSTS OF TWO TYPES OF TRACK CONSTRUCTION

	Unimproved Type 1913 Weights	Improved Type 1927 Weights
Grading	27.1%	13.1%
Track and Roadway Labor	18.3	29.4
Ties	7.3	8.3
Ballast	0	11.3
Rails, Fastenings, Etc.	47.3	37.9
	100.0%	100.0%

Apparently, for purposes of estimating, the question as to whether an index is based on a light unimproved section of track, or on a heavy improved modern track, is of comparatively slight importance although, of course, the results will be more accurate with the proper index.

If a dollar was spent for track in 1913, it would have a reproduction value of $1.98 today, by applying the 1913 track index, and $1.89 by dividing by the 53 shown for 1913 in the improved track index, or the use of the improved track index in place of the unimproved track

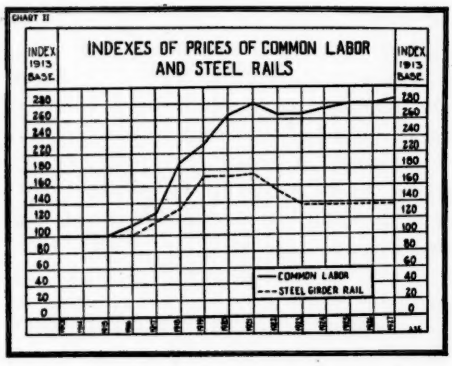
TABLE II. INDEXES OF TRACK CONSTRUCTION COSTS USING VARYING WEIGHTS AND BASES

Year	Unimproved Type 1913 Weights 1913 Base	Improved Type 1927 Weights 1927 Base	Unimproved Type 1913 Weights 1927 Base	Improved Type 1927 Weights 1913 Base
1913	100	53	56	100
1914	102	53	57	102
1915	100	53	56	100
1916	104	55	56	106
1917*	138	66	74	129
1918*	169	84	89	168
1919	208	105	120	208
1920	235	115	121	232
1921	243	117	125	237
1922	188	100	98	204
1923	192	96	98	200
1924	181	96	93	199
1925	192	98	97	204
1926	195	99	99	207
1927	198	100	100	209

* The weights and price data used are from reliable sources except that in the years 1917 and 1918 there was not enough of this class of construction to be representative.

would give a result which was only about 4.5% too low.

The element which causes the greatest rise is, of course, labor, which has risen from 100 to 286, and the element which has shown the least rise is steel rails, the index for which has risen from 100 to 137. In other words, rate of rise of labor has been five times more than that of steel rails, illustrating the amount to which efficiency in steel manufacture has absorbed the rising cost of labor (See note on 1917 and 1918 costs, Table II). The indexes of prices of labor and steel rails are shown on Chart II.



The increasing importance of labor cost is shown graphically by Chart III. The variation in weight of labor and of rails from year to year in the total cost of the unimproved section is shown by assuming for each its weight in 1913 as a base and charting its variations from that base in the succeeding years. It must be kept in mind that we are speaking here of the variation of importance within the typical section and not the variation in price of the element. It is possible that the price of the element might rise greatly, but, owing to an even greater rise by the other elements, the importance of the first would not be as great in the end as at the beginning. This is shown by the behavior of the

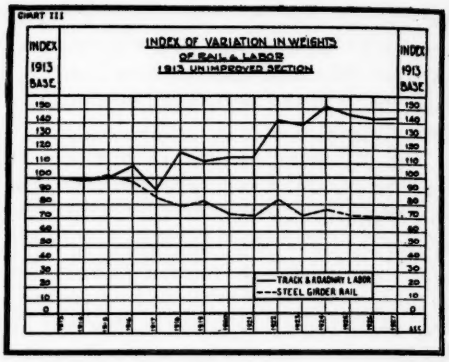
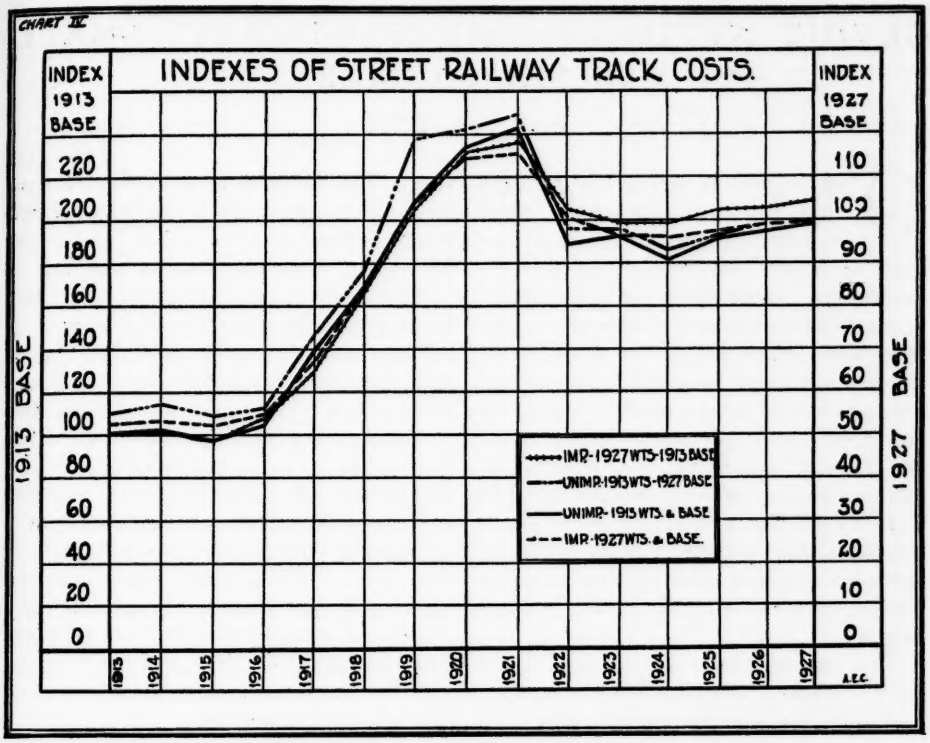


CHART III
INDEX 1913 BASE
INDEX OF VARIATION IN WEIGHTS OF RAIL & LABOR 1913 UNIMPROVED SECTION
INDEX 1913 BASE
TRACK & ROADWAY LABOR
STEEL GIRDER RAIL

steel rail and labor prices. Although steel rail advanced in price, its advance was only at 1/5 of the rate of that of labor and, although the weights of steel and labor were 47.3 and 18.3 respectively in 1913, for unimproved track, they were 32.8 and 26.4 in 1927. That is, they changed from a ratio of roughly 2½ to 1, to be almost equal. For this reason it is important that the weights should be taken at a time which is close to the base year. Yet even if they are not so taken the effect is not very serious, as shown below.

This study was then carried further by using the improved track weights of the present as a base for 1913 and the unimproved track weights of 1913 for a a base in 1927, to construct two indexes running forward and backward respectively. These two indexes, although not on weights which are absolutely correct for the bases used, give results which do not vary greatly from the two previously described. All four indexes are shown in Table II, and graphically on Chart IV. An inspection of this chart will show that even where the index is constructed on the weights of 14 years after or before the base year, as the case may be, the trend is nevertheless very similar. The improved track on the 1913 base with the 1927 weights shows the greatest rise, because in 1927, for im-



proved track, the labor item had the greatest influence.

To sum up the above, although it is better to use an index based on the weights of the approximate period to which it is to be applied, the error resulting from the use of the index based on the weights of some other period, for a structure which is similar, would seem to be negligible; and even where the weights of one period are used for another period, which in point of cost variation is distant, the trends are very similar.

CREDIT NEEDS OF THE NORTHWEST SMALL GRAIN FARMER

By L. F. GAREY

ONE means of aiding the farmers that has been repeatedly urged in recent years is further extensions of credit. In the light of this demand an examination of the credit needs of farmers seems particularly appropriate. Such a survey of credit requirements must be preliminary to the formulation of sound public or private credit policies. Obviously, also, credit needs vary according to the kind of farming and other local conditions. The purpose of this article, therefore, is to assemble the pertinent facts with respect to a given area, rather than to outline in detail a credit policy for that area.

The spring wheat region in Minnesota, South Dakota, North Dakota, and Montana has been selected to illustrate the problems involved. This study will present facts as to when, for what purposes and in what amounts credit is demanded; to what extent these demands have been met; and what considerations do or should influence the supply of additional credit facilities. The factors discussed below, while not an exhaustive list, are suggestive of the type of information necessary for determining an agricultural credit policy for small grain farmers in the Northwest, as well as for farmers in other regions.

The Function of Credit

The small grain farmers' need for credit is evident when one considers that the crops are harvested generally in the autumn months but their consumption is distributed throughout the year. This lapse of time in the marketing of farm products involves expenses which must be borne by someone. Moreover, the distribution problem is further complicated by the fact that the home-grown products must compete in the market with similar products coming into the home market from other countries. For example, the bulk of the wheat in the United States is harvested during July and August but, in its marketing, consideration must be given to competing export areas from which marketing is going on every month in the year. While these phases of the credit problem do not on first thought appear to involve the farmer, he must bear his share of the expense involved and is therefore concerned with it even though only indirectly.

The phase of the credit problem to be discussed here has to do chiefly with the producers' needs. It may be conveniently divided into two parts: (1) the characteristics of the enterprise itself; and (2) the financial condition of the farmer.

Characteristics of the Enterprise Determine Volume and Nature of Credit

The characteristics of an agricultural enterprise determine largely its need for credit. Distribution of sales, seasonal labor requirements and cost of materials, such as seed, fertilizer and twine, are some of the factors necessary to consider in extending credit to farmers.

From the standpoint of place in the cropping system wheat is the most important crop in the spring wheat region and it is around this crop that farmers

TABLE I. PERCENTAGE OF CROP LAND OCCUPIED BY THE SMALL GRAINS IN THE FOUR SPRING WHEAT STATES IN 1924*

	Wheat	Rye	Flax	Oats	Barley	Buck-wheat	Total
Minnesota	9.2%	3.4%	3.8%	25.8%	5.1%	0.3%	47.6%
North Dakota	41.8	6.3	9.4	13.2	7.4	0.1	78.2
South Dakota	15.1	1.5	3.5	18.0	5.0	0.6	43.7
Montana	48.8	0.6	3.8	8.5	1.5	trace	63.2
Average	35.8%	3.6%	6.0%	17.1%	4.2%	0.1%	66.8%

*Compiled from 1924 federal census report.

build their production plan (Table I). This is more true in Montana and North Dakota than in the other states. If we combine the crop land occupied by wheat, flax and buckwheat with that of rye, oats and barley which are sold as cash crops, approximately ½ of the land devoted to production of small grains would be used for cash crops. It has been previously pointed out that the consumption of these products is extended over the entire year and is influenced by exports from other countries, thus involving a storage problem which the farmers must bear.

Not all the grain produced is sold as a cash crop. Some is retained for seed for the coming year, some is fed to live stock and some is milled within the county. Table II indicates the disposal of wheat for the four states under consideration and for the United States as a whole.

TABLE II. DISPOSAL OF THE WHEAT CROP*

	For Seed	Fed to Live Stock	Milled in County Where Produced	Shipped Out of County
Minnesota	10%	7%	20%	63%
North Dakota	11	1	6	82
South Dakota	10	4	7	79
Montana	8	5	8	79
United States	8.6%	8.1%	20.5%	62.8%

* "The Wheat Situation," a report to the President by Henry C. Wallace (1923).

Over ¾ of the wheat crop in the spring wheat region must be distributed to the consuming public outside of the county where it is produced. Consumers do not want wheat by the wagon load. They want flour in 24- and 48- and 100-pound bags and then only as they need it. Some wheat is sold every month in the year, the heaviest sales coming in July, August, September and October, the months just following the harvest. During these four months 62.1% of the crop is marketed, thus throwing a severe strain on the credit machinery. It is obvious from the foregoing facts that financing the wheat crop is the central problem of credit in the spring wheat belt.

The farmer has certain demands for credit in the production of the crop. These are seed, feed, fertilizer, labor, twine and threshing which are out-of-pocket expenses and must be paid for in cash or credit extended. Often these cannot be paid until the crop is harvested and sold, which for some of the items is six months after the expense has been incurred. The heavy demand for labor comes during July and August when wages are highest and laborers in the harvest fields demand their pay immediately after the job is done.

The heaviest movement of agricultural products to market comes in October, although for wheat it is heaviest during August and September. During this period we should expect heavy demands on banks followed by a gradual tapering off toward the spring of the year. Liquidation of loans should begin during September and continue until

spring. Banks, therefore, should show a decrease in their agricultural paper through the autumn and winter when farmers are able to liquidate their loans. Data are lacking to show to what extent farmers in recent years have liquidated their obligations to banks as normally expected, but from the distressed condition of many country banks to which attention will be directed later, it is apparent that the normal amount of liquidation each autumn and winter has not taken place. One reason for this may be the fact that some farmers hold their surplus supplies until late winter or spring when the movement of crops is lighter in anticipation of a higher price. In the meantime, of course, these farmers must bear the storage costs which may or may not be offset by increased price at the later date of sale. But whether or not this holding of wheat off the market is sufficient to influence prices or what its effect is on farmers' credit needs are points on which exact information is lacking, although the extent of this storage practice indicates that many farmers, at least, feel that they gain thereby.

The Financial Condition of Farmers

Some people argue that further extension of credit to the farmer would be of no use since he is already so far in debt. This question has another side which most people fail to recognize. Much of the present farm debt was contracted when agricultural products were on a much higher price level than now. At the time the farmers sought these loans they were not aware that a depression in agriculture was but a few years away when they would be called upon to pay these loans. In periods of prosperity when credit is easy, farmers borrow money for farm improvement and expansion in their business and in periods of agricultural distress they are often forced to pay these obligations. The present financial obligations of farmers seem high because they were made when prices were high and have to be paid when prices are lower. Any debt is excessive under such circumstances. Most of these debts would be paid if prices were as high as when the debts were contracted. Many farmers who had land free from any incumbrance had to make use of the long-time credit plan to pay debts which they contracted for business expansion when prices were high.

A survey made in 1924 by the Department of Farm Management in the Minnesota Agricultural Experiment Station of 157 farms located in the six counties[1] adjacent to the Red River shows that the real estate indebtedness per farm averaged $5,963. This was 31% of the valuation placed on the land and buildings by the farmers. It is possible to secure up to 50% of the appraised valuation of land from many lending agencies, such as the Federal Farm Loan Board, Joint Stock Land Banks, state lending bureaus, investment companies and life insurance companies. The appraised value of land is about ⅔ of the farmers' valuation according to estimates by land appraisers. This would make the appraised valuation $11,758. It is evident that these farmers had borrowed up to the limit. In spite of this there is reason to believe that the mortgages would have been liquidated had a sharp decline in the price of agricultural products not taken place. This point merely indicates the necessity of considering possible price fluctuations in determining credit policy.

In addition to the real estate indebtedness chattel mortgages averaged $1,084 and personal notes $1,105 per farm.

[1] Kittson, Marshall, Polk, Norman, Clay and Wilkin.

Then each farm owed on the average $105 to stores but the merchants seldom charged any interest. This made a total indebtedness per farm of $8,152 on which interest was charged. The total annual interest paid per farm was $520, making the interest rate to the borrowers 6.4% on their total indebtedness. The usual rate of interest charged by local banks on chattel mortgages and personal notes was 10%. On most real estate loans the local banks charged from 7 to 10%, the higher rates being on second and third mortgages. The interest rates charged by other long-time lending agencies were from 5 to 6%. The interest alone constituted ¼ of the total farm expenditures. Rent, insurance, taxes and interest constituted 41% of their total expenditures and amounted to $2.25 per acre. This was for the use of capital alone. The total income per acre was but $5.20. This left for operating expenses $2.95 per acre, which was not enough. Obviously, under such conditions these farmers could not support such a heavy overhead.

The sources of a farmer's income have an important bearing on credit. The character of these sources affects the amount of credit needed, the period and terms on which it can be obtained. Wheat constituted an important source of income. One-third of the total farm income on these farms was from the sale of small grain. Thirty-six per cent. of the income was from cattle and dairy products. Swine constituted 8% and poultry 7%. Other sources made up the remainder, no one of which contributed as much as 5%.

The average long-term interest rate in the area covered by the survey, as shown by the 1920 Census, was 6.2%. In southeastern Minnesota where dairy farming predominates the prevailing interest rate for the same period was 5.5%. The distribution of the income in a dairy section in southeastern Minnesota for 1923 was dairy products, 36.6%; cattle, 17.2%; swine, 26.2%; live stock, 7.2%; crops, 10.1%; and miscellaneous, 2.7%. While this part of the State has been settled longer than the northwestern part, the lower interest rates to farmers are the result of a more dependable income and a part of this dependability is attributable to the combination of farm enterprises found there. In most kinds of farming production is affected by the weather and therefore accompanied by a high degree of risk. Since live stock production is less affected by weather conditions than is small grain production, the risk is less, the income is more dependable and consequently furnishes a more satisfactory security for loans.

One reason for the low income in 1923, as shown by the survey, was the low price level for agricultural products combined with low yields for that year. Another was the great diversity of income with small amounts coming from each source. With the price level as it was in 1923 it would be impossible for these farmers to make ends meet in years of low yields.

Table III shows that many agencies furnished credit to these farmers.

TABLE III. DISTRIBUTION OF AMOUNT OF CREDIT AND TYPES OF SECURITY FOR LOANS TO SMALL GRAIN FARMERS FROM VARIOUS SOURCES*

Agencies	Real Estate	Chattel and Personal
Investment Companies	25.0%	.2%
Individuals	23.3	11.0
Federal Land Banks	18.0	.....
Local Banks	15.4	81.5
Life Insurance Companies	9.0	.....
Minnesota Rural Credits	5.4	.....
Joint Stock Land Banks	2.8	.....
War Finance Corporation	1.1	7.3
Total	100.0%	100.0%

* Unpublished data.

According to the 1925 census report the ratio of mortgage to land value in

the counties previously referred to was 42.1. In other words, for every $100 invested in land there was a mortgage of $42.10 against the land. This ratio has continually increased since 1910. From 1919 to 1924 the value of land decreased but the amount of the mortgage continued to increase until by 1924 it amounted to approximately $20 per acre. In some cases in 1923 as many as three mortgages were out against the same piece of real estate. In addition these farmers often had chattel mortgages and unpaid store bills. The only outcome one could expect under such conditions would be bankruptcy among farmers.

Table IV shows the relation of farm bankruptcy to all cases of bankruptcy for several states for the periods indicated.

TABLE IV. PERCENTAGE OF FARM BANKRUPTCIES AMONG TOTAL REPORTED BANKRUPTCIES BY STATES AND YEARS ENDING JUNE 30.*

State	1922	1923	1924	1925
Minnesota	29.0%	28.5%	29.6%	23.3%
North Dakota	78.5	82.1	74.7	75.1
South Dakota	52.1	63.8	63.3	63.3
Montana	59.2	59.9	64.4	65.4
Ohio	9.4	12.2	13.7	11.8
Illinois	8.0	11.2	10.1	11.9
Wisconsin	8.8	15.8	14.9	20.2

* 1925 Agricultural Yearbook, p. 1386.

The smaller percentage of farm bankruptcy in Minnesota is the result of the establishment of better systems of farming in the southern and southeastern parts of the State than are found in the spring wheat region. The table indicates that but little change has taken place in the financial condition of farmers in this area since 1922.

These facts emphasize the need for capital to establish a system of farming from which farmers can pay not only their operating expenses, including interest on mortgages, but receive a reasonable wage, educate their children and enjoy as good a standard of living as their city cousins.

These are important needs if farmers are to remain in the business. There is evidence that some sections of the agricultural industry are undergoing a fairly radical transformation, both technological and economic. Many farmers have been forced to make drastic changes in order to remain in the business. But these changes, such as greater use of machinery on larger operating units, as seen in the spring wheat region, for example, are of a sort that require considerable credit assistance.

But how could a further extension of credit from either private or public sources help farms that now yield too little to meet existing credit obligations? The answer is that (1) it will give these farmers the resources to tide them over the period of depression in agriculture and (2) it will provide resources to expand their better-paying enterprises and thus realize better gains under similar conditions.

The Problem Viewed from the Standpoint of Credit Agencies

Up to this point I have discussed the credit needs from the standpoint of the producers in the spring wheat region. I should like to present briefly the other side which involves for the most part the banker.

Would an extension of credit for purposes indicated above conform to the true function of credit from the standpoint of lending agencies? To extend credit to tide over the lean years amounts practically to consumers' loans and involves subsidizing small grain growing and extending credit for purposes of social amelioration, a function which may be a duty of government but cannot be classed as sound practice for a private financial institution. From

the standpoint of safe banking, therefore, the argument that farmers are not making a living is an argument opposed to and not in support of further credit extension. In the second case, the extension of credit for development of better-paying enterprises must be justified on the basis of the returns that can be anticipated under present and prospective economic conditions. It is poor finance to send good money after bad. In so far as the present financial condition of small grain farmers is such that additional capital will mean the turning of loss into profit or of small profit into larger profit through the expansion of paying enterprises, the need for capital may be rated as a credit need and the credit should be supplied. The point I wish to emphasize here is that the mere asking for a loan, however pressing, on the part of any class of producers, cannot be rated as prima facie evidence of a need for capital.

Bankers have to consider their costs of lending to farmers. In the past this has been done for the most part only in a rough and ready fashion. Unfortunately no figures are at hand which give the cost to bankers of farmers' loans. A study of country banks which would reveal the costs of operation and form a basis for readjusting the country banking business to meet more adequately the requirements of those who support these banks is sorely needed.

The number of bank failures and farm losses through foreclosures and bankruptcy during the agricultural depression is sufficient evidence to prove that loans to farmers were costly. Banks do not thrive when they are forced to foreclose on farm loans. Too often the assets so acquired become frozen and result in bank failures. Bank failures in Minnesota have been most numerous in the areas where farming included the most cash crops and have been least where farming has been more dependent on the dairy and live stock enterprises. From 1920 to 1926 the number of bank failures in the six Minnesota counties adjacent to the Red River was 31. In an equal area in the southeastern part of the State where dairying predominates the number of bank failures was 20, and in an equal area in the southwestern part of the State where live stock farming predominates the number of bank failures was 25. The number of bank failures was greatest in the small grain section in spite of fewer banks operating there. The percentage of total bank failures in the State occurring in each of the areas referred to above was 17.5% in the small grain area, 11.3% in the dairy area, and 14.1% in the live stock area.

The State banking department gives a variety of reasons for bank failures during the period 1920–1926. Frozen assets caused 61% of the total bank failures.[2] Of the 108 banks closed for this reason 32 or approximately 30% reopened. The next most common cause of failure was depleted reserves. This was the cause of 19.2% of the total failures. Fifteen of these or 44% reopened their doors. Other significant causes of failures as given by the bank examiners were foreign paper, criminal irregularities, mismanagement and irregularities and excess loans. Thirty-two per cent. of all the banks in the State that failed reopened.

Small grain farming is usually found far from industrial centers. It is a type of farming that is subject particularly to weather conditions and has a seasonal output which cannot be regulated as

[2] A study made by Professor Garlock in the State of Iowa indicates that frozen assets were the chief cause of bank failures there. See 2 *Journal of Land & Public Utility Economics* 48–66 (February, 1926).

readily as that of many industries or other types of farming where the output is distributed throughout the year. For these reasons small grain farming is slow in readjusting itself to lower price levels and hence becomes an expensive type of loan for a lending agency. Whether or not this slowness of readjustment justifies public loans on more lenient terms, supplementing private credit, is a moot question. More data are needed on the changes now taking place, if any, in the technique and business of small grain farming. Should such an investigation reveal progress in readjustment, which might be facilitated by judicious lending of public funds, a case might be made out for this policy.

Nevertheless, an examination of farm bankruptcy in the United States shows the percentage of farm bankruptcy to total bankruptcy to be greater in the spring wheat region than in the corn belt or dairy districts. Thus, regarded solely as a productive enterprise, small grain farming does not invite unlimited credit extension under present conditions.

So far as private credit agencies are concerned, the general principles seem clear. Credit extension to those who can adjust their farm organization into a better-paying business is justifiable. Those who cannot so adjust their business constitute problems in philanthropy and not in credit finance. Farm reorganization may offer a legitimate field for credit extension to small grain farmers in view of their present financial distress. Farm operation on the basis of present organization does not. This does not apply, of course, to individual farmers whose organization shows a reasonable return. One cannot make a blanket statement which will apply to all cases because of the diversity in managerial and business ability, as well as in other personal factors among farmers.

Summary

Credit for small grain farmers is of two kinds. The first is for production which takes the form chiefly of intermediate and long-term loans. The problem is financing operations as well as investment. Unfortunately the element of speculation is greatest in the small grain areas and the financing of land investment has been permitted to overbalance the financing of the operations of this class of farmers. However, sufficient agencies are in existence to provide for the long-time and intermediate loans to farmers. It is true that all requests for loans have not been granted but it should be remembered that a lending agency can advance money only when it is backed by security that can be rather quickly liquidated.

The second kind of credit needed by small grain farmers is to meet seasonal marketing requirements. These are relatively short-time loans and no special provision has been made to take care of such loans. In most cases the farmers call on the local bank to meet their need for this type of loan. The local bank has not been in position to handle such loans economically and hence such loans have been rather expensive and for that reason unsatisfactory.

Bankers or other lending agencies are perfectly justified in demanding from farmers a financial statement of their business showing assets and liabilities as well as a statement as to when and from what source the farmer expects to pay his loan. On the other hand, farmers are equally justified in demanding from bankers short-time loans at a reasonable rate of interest without fear of foreclosure in case of unavoidable loss. Loans should be made on the basis of statistical information, not on opinion.

THE "FREE-LOT" SUBDIVIDER: HIS METHOD OF OPERATION AND THE AVAILABLE METHODS OF CONTROL

By H. MORTON BODFISH

Standards of Business Practice

THE development of trade associations has given rise to an increasing amount of extra-legal control over the conduct of business during the past decade. The "code of ethics," better called "standards of business practice," is the chief medium of this control. Although such formulations may be far in advance of the actual practice of the trade-group as a whole, they are useful and mark a stage in the evolution of better trade practices.[1] In some localities effective methods have been developed to control those of the trade-group who do not observe the code.[2]

The real estate business is an example of a trade-group having an unusually large number of middlemen whose operations cannot be approved except under the most extreme caveat emptor philosophy. Transient members of the trade move hither and yon in the van or wake of land selling and construction activity. The practice even in reputable real estate organizations of hiring all who come, under a commission form of remuneration permitting evasion of financial responsibility for poor selection of employees, has made the business the residual claimant of failures in other occupations. The tardy development of means of controlling participation in this business, through licensing laws, has given the buyer little recourse in case he is victimized by a predatory operator.

It should not be overlooked, however, that many real estate operators are men known for their services to the community and the writer feels that the majority of the members of the trade are men of business integrity and competence.[3] But they and the trade as a whole suffer from the operations of those who bring the business under suspicion by their predatory activities. It is probably true that the general public has little confidence in the real estate business as a whole. The confidence which does exist arises out of personal contacts, continued for a period of time, which are essential to the development of professional responsibility. But we find the reputation of the reliable practitioner and the standards of his trade marred by a small portion of the group, such as those whose objectionable merchandising practices are described here.

I. *Predatory Subdivision Activities Related to Free-lot Schemes*

The merchandising of subdivision lots seems to be an especially fertile field for those individuals whose predatory tactics have resulted in the bringing of the real estate business into disrepute among so many people. Among these schemes may be enumerated the pitch system, the re-sale promise, contract raiding,

[1] J. M. Clark, *Social Control of Business* (Chicago: University of Chicago Press, 1926).

[2] For example, license laws, laws prohibiting adulteration, bait advertising, etc.

[3] The writer was recently told by the Chairman of the Real Estate License Commission of a mid-western state that very seldom does a member of a regularly organized Real Estate Board have to appear before their body.

various forms of misrepresentation, and the free-lot racket. For primary data on high-pressure subdivision selling, examine the classified advertising section of almost any daily paper in our larger cities. There you will find traps for the unwary under the "help-wanted" classification. The appeals range from direct requests for sales representatives to invitations to attend psychology meetings and schools of salesmanship. The whole objective is to obtain man-power and prospects for the sale of subdivision lots. The underlying idea is that out of so many men hired a certain proportion will buy one or two lots themselves, or sell to their friends and relatives before they find that they were not predestined to be real estate operators.[4]

Marginal Predatory Activities. The above mentioned schemes are definitely predatory and unethical and there are many twilight stratagems which may be described less harshly. One example is the "bus ride or chump chariot" operated from the vicinity of a public park with a "bus loader," usually a woman, to solicit prospects to go on a "free" ride to the subdivision. Beautiful scenery and luncheon are the allurements used and they are especially directed to elderly people. The bus loader gets one dollar a head. At the development the free-riders run the gamut of lecturers and successive salesmen and contracts rapidly manipulated in order not to delay the return trip unduly. The "bird dog" is a slightly more pedigreed relative of the bus loader because he or she works for a salesman and participates in the commissions derived from sales made to prospects scented by him. Another much-used device is "Advertising for Saleslady." Representations are made concerning large commissions to be earned and then if the applicant is accepted she is told that "all the sales force buy a lot and pay for it out of their commissions." She signs up and makes an initial payment and later, finding real estate selling a difficult role for the novice, gives up after having unconsciously played the role of purchaser instead of sales-representative. In some respects this device is similar to the "pitch system" which applies the technology of large scale production with the same objective.

The Pitch System. The "pitch system" is a rather complicated and highly organized scheme. The following is an analysis of the system used by several firms in one of our larger cities as presented in the Real Estate Bulletin of the Chicago Better Business Bureau, June, 1928.

ANALYSIS OF SYSTEM

An analysis of the Pitch System shows the following elements:

1. Advertisements appealing to persons desirous of earning money in their spare time.

First Day

2. General meeting of all respondents to the advertising.
3. Introduction of a "Major" or "Colonel" or some such character to lend dignity.
4. The "Pitch" talk by the "Colonel" or "Major."
5. Invitation to see Chicago.

Second Day

6. The trip on what is known as the "Hit" bus or "Hit" train.

[4] The evolutionary aspect of this process is described by Mr. Jack Woodford, 15 *American Mercury*, 494, (December, 1928).

"Every now and then, indeed, one of the suckers roped into taking a straight commission job discovers a real talent for salesmanship and makes enough money to buy an assembly room of his own, in which to ramp and roar to suckers he has roped in through phony classified ads of his own."

Though not necessarily predatory, the writer is inclined to look upon the subdividers who merchandise their wares in distant cities or who advertise for foreign-language salesmen in order to appeal to the land hunger of certain racial groups as needing to prove the soundness and character of their operations. The practices mentioned are suggestive, rather than all-inclusive.

7. Talk at property by the "Major" or "Colonel" on industrial conditions.
8. The disparaging of investments such as stocks, bonds, and savings accounts.
9. Psychological talks for the purpose of subduing any person who might entertain differences with the statements made.
10. The offer of real estate to the job seekers.
11. The sale of real estate.
12. The breaking of sales resistance by promises of huge profits in a short time or resale, etc.
13. Suggesting the borrowing on life insurance or securing a loan from friends to make down payments on real estate, if respondent does not have any money.
14. Invitation to the company's office to learn about the promised work.

Third Day

15. Work explained which consists of securing prospects for the purchase of real estate—on a commission basis.
16. Lecture on real estate by some man who is stated to be an expert on the subject. (Pep Meeting.)

Two items (Nos. 10 and 16) in this program are particularly insidious. The method is plainly based upon obtaining people's interest by offering them employment. The character of the employment is withheld until the persons attending the meetings have listened to several inspirational talks and actually visited the property. During the portion of the presentation in which the qualities of *alternative investments* are questioned the speaker asks his audience to raise their hands if they own stocks; again a little later if they own bonds; and again when he proves to them that the savings bank pays them 3% on their deposits, only to invest the funds thus obtained in real estate. Need it be indicated that those who raise their hands in response to these questions are the first to be intensively interviewed by the assistant salesmen? As a result of this preparation as many as 25% to 30% of the prospects have been induced to purchase. This practice is particularly reprehensible as it draws people through the help-wanted columns and therefore includes many who are sincerely seeking employment and whose financial status makes a major real estate purchase most unwise, if not financially tragic.

Resale Promises. One of the most common of the predatory tactics of the subdivision business is the use of re-sale promises.[5] For example, a salesman in New Jersey offered a woman "six lots for $800 with a verbal guarantee that he had another prospective buyer ready to pay $1,800 for the six lots, which sale he promised to make 10 days after the purchase. He is said to have told the prospect that he had a deposit of $600 on the $1,800 from the other buyer and his reason for offering them to her was to enable him to make a double commission on the sale."[6] The gross deception in such instances is self-evident. The principal escapes liability through clauses in the purchase contract and through disavowal of responsibility for the representations of his salesman.

Contract Raiding. Contract raiding features the acceptance of partially paid lot contracts of other concerns at full face value as first payment on a contract for a lot or later from the raiding subdivider. The raider then tears up the original contracts.[7] This, of course, results in unperformed contracts and is a distinctly unfair method of competition.

[5] This practice is sometimes used by the salesman of even the legitimate subdivider in his anxiety to earn a commission. It is not necessarily confined to the subdividing field, for it is a problem in brokerage also.

[6] *New York Times*, July 31, 1927.

[7] As a fact of legal significance, practically all of these contracts provide that the purchaser shall not transfer or assign the contract without the written consent of the original seller. This written consent is required in order that there will be privity of contract between the seller and the assignee. In this manner the assignee will be personally liable to the seller and the original purchaser's liability is removed.

In addition to being unfair to the first subdivider, this destruction of the original contract without assignment makes the purchaser liable on the contracts for two purchases. The practice is plain misrepresentation because the raiding subdivider is telling the purchaser or inferring that he will assume the contract.

Other Forms of Misrepresentation. Misrepresentations are many and varied. In fact, the practices outlined above may be termed indirect misrepresentations, but positive misstatements as to the character of the property are also found. Some of the most frequent deceptions are in regard to improvements. The average person appealed to by the habitual users of these tactics is quite likely to be very inexperienced in matters of this kind or to have the "sucker habit." Generally it will not occur to him to check the statements of the salesman who says that all the improvements which are generally installed before a home can be built are already in or are to the edge of the subdivision, "and will be installed this summer, in fact, we are trying to sell out this section within the next week or so because after they start working here it will be rather hard to bring people in to show these lots." The possibility of complete failure to install or installation at the usual costs ranging from $400 to $1,000 affects the costs or the ultimate value of the lot.

Another common form of misrepresentation, especially in cases where the lot is sold by mail and the purchaser does not have an opportunity to inspect it, is to state that the property is much nearer the center of the city, or the means of transportation, or the most desirable residential district, than it really is.

Promoters of subdivisions who practice this type of merchandising sometimes give very ambitious outlines of building operations which are to be carried out by the company and which will greatly enhance the value of the lots purchased in the tract to be developed. Needless to say, this program never materializes.

II. *Free-Lot Operations*

The free-lot racket centers around the something-for-nothing idea and in addition is usually associated with some of the worst forms of the predatory schemes outlined above, such as resale promises, misrepresentations as to improvements or location of the property. The unscrupulous methods used by some of the free-lot promoters are shown by the offer of one such firm "to 'give' a free lot to a customer upon payment of $50 to cover the so-called expenses and then offer to repurchase the same lot for $200 or $300 provided the customer will sign a letter stating that he has made a profit of $250 on the lot in one week's time and that he highly recommends the development of the company for investment purposes."[8]

All of these schemes result in loss to the public and loss to the legitimate subdivider because the victim of a predatory real estate merchandiser is likely to be very cautious before he buys another lot, and in addition may discourage many of his friends from investing in other subdivision lots, no matter how free from unethical factors the other propositions may be.

Prevalence. The transient nature of the business of the free-lotter makes it difficult to estimate the extent of the activity. However, undoubtedly it was carried on in almost every city of the country during the days of the urban real estate boom of 1925–1926. As closely as the writer can estimate, 250 to 300

[8] *New York Times*, June 14, 1925.

such concerns were operating at that time. In fact, the operations of the free-lot subdivider went on almost unchecked, and probably in undiminished volume until the last year or so. However, the activities of the National Association of Real Estate Boards, the local Real Estate Boards, and the Better Business Bureaus have resulted in great curtailment of the free-lot business within the latter half of 1927 and the first half of 1928.

At one time Mr. Thomas F. Kane, an assistant attorney on the staff of the prosecutor of New York City, had data concerning 35 promoters whose profits were estimated at $500,000, and who were said to represent only a fraction of the activity in the metropolitan district. In February, 1928, Mr. Flint Grinnell, manager of the Chicago Better Business Bureau, stated that the 35 to 40 free-lot firms in that city were victimizing about 15,000 people a year. These statements indicate the extent of the business in the two largest cities of the country. That the scheme is country-wide is shown by the fact that in the 16 states which have kept records of such cases, over 10,000 complaints have been received by the license commissions.

The promoters of the free-lot "racket" have moved constantly from place to place, changing their bases of operations as the opposition against them crystallized. This has been especially true of those using the most objectionable practices, involving many forms of misrepresentation and, in some cases, outright fraud. For example, two of them were under indictment at one time in Essex and Hudson Counties, New Jersey and in New York. There is a record of one organization which operated in Omaha, Nebraska, Sioux City and Cedar Rapids, Iowa, Moline, Illinois, Knoxville, Tennessee, and in New Orleans, using at least two different names. It has been found that even in the same city one organization will operate under two or more different names. The idea seems to be that every time a tract is sold out, or the public becomes too familiar with the firm's operations, the thing to do is to change the name and thus evade the accumulated opposition of part-purchasers and organizations opposed to the practice.

The difficulty of discovering just who is behind the company in any particular case is increased by the fact that the stationery used generally contains no names and most of the transactions are carried out entirely through representatives.[9] The interrelations of such schemes are difficult to trace but in one case a Columbus firm referred a possible purchaser to its Chicago office which in turn gave information concerning developments in two other midwestern cities.

The operations of the "free-lotter" are especially reprehensible because his activities are directed against the class of people who generally can ill afford to lose any of their hard-earned savings. In cases where the leads were obtained through house-to-house canvassing the canvassers were directed to go to the districts containing the residences of the working class. Such people generally have very little experience with real estate transactions and are not familiar with the factors influencing the value of a subdivision lot. At the same time, the seemingly bona fide award of a prize which is supposed to be worth several hundred dollars tends to overwhelm

[9] In a case investigated by the writer it was discovered that the syndicate owning the land which was being sold through this device included several reputable professional men, and a bank officer. One of the professional men, when interviewed, indicated that the participants would receive approximately a 200% return in less than a year's time.

people of limited means and certainly does not help to clarify their judgment.

Methods Used In Obtaining Leads. The operators of the free-lot scheme seem to have developed a number of almost standardized methods for obtaining leads. Almost all of these methods are found in practically the same forms in various parts of the country. Furthermore, the same operator will use two or more methods, abandoning one and taking up another as the public becomes familiar with the first.

Perhaps the most common method is the securing of signatures at the entrances to theaters, at fairs, and, in fact, almost everywhere that people congregate in considerable numbers. Sometimes the explanation given is that the company is about to start an advertising campaign for a new subdivision and in order to secure publicity one of their lots is to be given away free. Often, however, no mention is made of real estate, the inducement to sign being a chest of silverware or some such valuable "prize." Lists of stockholders of bankrupt concerns are another source of names.

After the lists have been built, the individuals who have signed are approached through the mail. In such cases the first letter to the prospect appeals to his vanity:

"*We have selected you to benefit by this very liberal offer, because a representative citizen gives prestige and advertising value to our property, which may mean future business.*"

Another method of securing names is to have women furnished by employment agencies conduct a house-to-house canvass, ostensibly to furnish material for a population estimate. Frequently the canvassers themselves do not know the real purpose of their work.

Some companies have used the idea of scattering "lucky" coins on the sidewalks. One side of these coins bears the name and address of the free-lotter and the other side states that by calling at the office of the firm the finder will receive a lot free of charge, except for "title expenses."

Puzzle contests have been run in newspapers, the people who are "clever" enough to solve the "puzzle" being awarded a lot. These "puzzles" are always so simple that any child could solve them. Sometimes they are cross words and sometimes rearrangements of letters. Exhibit I is an example of the latter.

EXHIBIT I.*

CAN YOU SOLVE THIS?

DIERFLAG

The above letters, when properly arranged, spell the name of a late president. Every one sending in the correct solution will be awarded a beautiful lot, size 25x125 feet, FREE AND CLEAR OF ALL INCUMBRANCES, in our new Lakeview Subdivision, located in a summer resort section in Michigan. This offer expires in 15 days.

MICHIGAN SUBDIVISION ASSOCIATION
Book Bldg., Detroit, Mich. Suite 516

* Taken from the *Dayton Journal*, June 7, 1925, p. 16. The page also contained many building and loan association ads.

Another example of the type of advertisement used is as follows:

"Can you solve this—AMET?

The above letters properly arranged spell something pertaining to food. Everyone mailing a correct answer will receive within a reasonable period of time free along with $10 and clear of encumbrance, a deed to ½ acre of land in Sunny California, or your money will be refunded."

These operators were apparently taking no chances that readers of their advertisement would be prohibited from obtaining a half acre.

Another method which makes use of the wide circulation of the newspapers is to run an advertisement saying that

in order to secure wide publicity for a new subdivision which the company is opening they are going to "give away" a limited number of lots absolutely free of charge to the persons who are fortunate enough to be selected. All that is necessary to secure a chance at this prize is to sign your name and address to the attached coupon and mail to the company. In following up the leads, obtained in this way the "winners" are told that they were selected because the company had not yet sold any lots to people in this particular section of the city and they were anxious to get started here. The reason given for choosing this particular person was that the company believed that his recommendation of the lot would be of great value to them in their sales campaign.

The following excerpt from an article in a metropolitan daily shows how the newspapers were used to obtain leads in still another way:

"Another method of Free-lot scheme operators, the commission (New Jersey Real Estate Commission) stated, is to use the help wanted columns of newspapers with attractive advertisements of alleged high-salaried positions. When answering these advertisements prospective sales people, it was said, are advised that they do not need real estate licenses and are sent out as canvassers to induce unsuspecting persons to sign cards for a 'free-lot' or to visit the tract of the company employing such canvassers on a free excursion. Property is then offered for sale by these operators and misleading statements are made, with the result that they are finally summoned before the Real Estate Commission and fined $200 for operating without a license."[10]

Types of Schemes. Two main types of free-lot operations may be distinguished. In one of these the lots are *fairly close* to the city, that is, within 20 or 30 miles, and reasonably close to some means of transportation so that possibly sometime within the next 50 years they will be used as sites for residences. The major profit to the promoter is gained by "switching" the prospect from the lot which he has "won." This lot is nearly always located in the poorest part of the subdivision and is seldom over 25 feet wide by 120 feet deep. It is probably worth about the sum which the prospect is to pay for "incidental expenses." However, the scheme is to "switch" him to a more desirable lot which is priced sufficiently high for a credit to be allowed for the first lot and still leave a handsome profit.

In the other type of free-lot activity the lots are situated miles from any city, are usually grown up with brush and probably never will be put into urban use. Here no attempt is made at switching, the land being all equally "*desirable.*" The tract is described in glowing terms and is nearly always much misrepresented. The promoter makes a profit because he can buy the land for as low as $20 an acre, cut it up into six or seven lots per acre, "give" them away for $19.82 "title expense" per lot and still make a good profit by his "philanthropic" activity.

Close-in Lots. After the leads have been obtained in a manner described above, the next step is to break the good news to the prospect. Here the methods differ according to whether the lots are close by or are simply "wild" land perhaps hundreds of miles away. Buyers of the latter kind of lots are handled almost entirely by mail, while purchasers of the former seem to do better when the personal touch is used.

The conservatism of some of the "free-lot" literature is impressive. The following excerpt from a descriptive circular of one organization invokes a poet, presidents, a merchant and the father of political economy to vindicate

[10] *New York Times*, July 31, 1927.

the investment presented. The innuendo is that the remission of $49 will take the remitter from the rent-paying class into the path commended by the quotations.

EXHIBIT II

"TIMELY SAYINGS BY MEN WHO HAVE MADE IMMENSE FORTUNES IN REAL ESTATE

JOHN JACOB ASTOR said: "Buy at the fringe, AND WAIT." (This rule made his children the largest real estate holders in America.)

ANDREW CARNEGIE said: "I came to possess a surplus of wealth by purchasing real estate with money some threw away, and going into debt for the rest."

MARSHALL FIELD: "Buying real estate is not only the best way, the quickest way, and the safest way, but the only way to become wealthy."

RALPH WALDO EMERSON: "The first farmer was the first man, and all historic nobility rests on possession and use of land."

ADAM SMITH (Economist): "Land is a fund of a more stable and permanent nature; and the rent of public lands, accordingly, has been the principal source of the public revenue of many a great nation that was much advanced beyond the shepherd state."

THEODORE ROOSEVELT: "Every person who invests in well selected real estate in a growing section of a prosperous community adopts the surest and safest method of becoming independent, for real estate is the basis of wealth."

GROVER CLEVELAND: "No investment on earth is so safe, so sure, so certain to enrich its owner as undeveloped realty. I always advise my friends to place their savings in realty near some growing city.

There is no such savings bank anywhere."

WILLIAM JENNINGS BRYAN: "Real Estate is the best investment for small savings. More money is made from the rise in real estate values than from all other causes combined. To speculate in stocks is risky and even dangerous, but when you buy real estate you are buying an inheritance."

CALVIN COOLIDGE: "The ownership of a home, the feeling of independence that comes with the possession of a bit of the earth are among the most powerful incentives to high civic interest and usefulness."

ALVA BRADLEY, a lake Captain, living in Cleveland, Ohio, amassed a fortune of $450,000.00 by investing in Cleveland real estate. In his will he stipulated that the estate should be held intact for twenty years. When it was divided amongst the heirs, the estate had increased in value to $4,700,000.

Does It Pay to Invest in Real Estate?"

Switching Tactics. If the land is fairly close to the city and "switching" tactics are to be used, the prospect is congratulated by the company representative who tells him that he has been awarded one of the lots which the firm is giving away as a publicity stunt. All that he has to do is to visit the property, see how good a proposition it is, and then write a letter of recommendation for the company, which will be of considerable value because of his prestige in the community. By this time the "winner" is most interested and finds himself agreeing with the bright young man who is saying, "Of course, you realize that the company cannot be expected to pay for having the title searched, the papers drawn up, and all the incidental expenses which come up in a transaction of this kind. This amounts to $69. Now, Mr. Blank, if you will give me $5, just to assure us that you won't disappoint us, I will give you a receipt for it. Then next Sunday come down to our office and you will be taken absolutely free of charge to inspect the lot which you have "won." Bring the balance of the $69 with you and we will give you a deed for the property."

The next Sunday the "winner" goes out to inspect his "prize." He is disappointed to find that the lot is only about 25 x 120 and is located in the most undesirable part of the "subdivision," which looks to him a great deal like a cow pasture, with perhaps plowed strips, one or two of which may be cindered, marking the street of the "community."

The salesman is very sorry indeed that the lot awarded proved to be such a poor one and is sure that there has been mistake made in the office. However, he is positive that the value of the lot "won" (generally about $500), can be applied upon one of their really choice residence sites. They decide to look at some of these lots, priced at about $1,100. The salesman starts talking about the future of this part of the city and the "winner" often signs a contract to purchase a lot on which he owes a balance of $600.

In an actual switching case the victim discovered that the lot which he had been "awarded" was poorly located and in many respects undesirable. The company agreed, however, to give him a credit for the value of this lot ($600) on one of their better lots, the price of which was $1,400, leaving a balance of $800 to be paid in monthly installments. This company was also selling lots without the free-lot inducement and it happened that one of his friends purchased a lot close to the one he finally took. By some coincidence the price of this lot was also $800!

In another case the recipient was altogether dissatisfied with the lot which he had won. "By special arrangement with the manager" the salesman said that a credit of $500 would be allowed for this lot on the purchase of some other site in the tract. The prospect was then shown a lot whose price was $700. He let it be known that he had saved some money and was immediately shown a lot priced at $900. The prospect then told the salesman that he had inherited some money recently and was looking for an investment for it. He was then shown another lot one block over which was priced at $1,500. The price of the lots seemed to be a function of the purchasing power of the victim rather than of the elements which go to make up value in real estate.[11]

In showing the property after the purchase has been "selected" the operators are most insistent that the wife accompany the husband "in order to handle this transaction according to our terms." The underlying psychology is that the wife is more susceptible to the switching manouver, appreciates the worthlessness of the lot awarded, and usually desires a real home site.

Another common occurrence is to find the "free" lot to be only 25 feet wide, while local zoning and building ordinances require a lot of at least 50 feet in width. Fortunately the adjoining lot always happens to be for sale. Its price may seem to the purchaser to be a little high but he figures that since the other half is being given to him for nothing he can get a 50-foot lot at a very reasonable price. This feeling generally does not last very long after his first attempt to sell the lot.

The Distant Lot. If the lot is located some distance away the "winner" will receive a letter congratulating him on his good fortune and describing in glowing terms the wonders of this particular subdivision and the advisability of investing in it. The following is a copy of a "come-on letter" of the Interstate Resort Organization, received by a man in Lorain, Ohio, on July 13th, 1925.

EXHIBIT III

Phone Dearborn 5176
INTER-STATE RESORT ORGANIZATION
RESORT SUBDIVISIONS
123 West Madison Street
815 Madison Square Building
Chicago, Ill.

This is to advise you that your solution of our newspaper puzzle was correct and you

[11] The "recipient" prospect and "victim" in this case was a member of the research staff of the Institute for Research in Land Economics and Public Utilities. But we hasten to add that no sale was made.

have been awarded a lot size 30 x 150 feet, located near the town of Park Falls, Price County, Wisconsin.

Wisconsin, as you know, is one of the most beautiful states in the Union. Though it has been settled faster than the prairie states were during the famous land boom, over 92% of the people in upper Wisconsin own their own land and homes. It is the country of land owners and working men and women.

The climate is healthful, ideal for men and crops. The soil is unsurpassed in productivity and the possibilities of the country in dairying and stock raising is rapidly putting it ahead of many high-priced lands in older communities.

This property is conveniently located and easily reached by automobile highways and two railroads; the Soo Line and the Northwestern. Both of these roads run into Park Falls and give easy access to the larger towns and cities.

Of course you understand that it is necessary for you to have a warranty deed delivered to you by us, showing you as the legal owner of this lot. We have made special arrangements so that we can deliver you the deed of conveyance for the small sum of $5.85. This charge covers the expense involved in this transaction, together with the cost of the drawing of the deed and the transferring of the property to you. *There will be no other charges. This lot is awarded to you free and clear of all encumbrances.* Should you wish to purchase any additional lots, our present price on them is $49.50 each. They may be purchased on a monthy payment plan of $4.50 down and $5.00 a month until paid for. However, you are under no obligation to purchase the additional property if you just want one lot.

As this property is going very fast, we must hear from you within *ten* days; otherwise we cannot reserve your lot. Advise us at once to whom you desire the deed made. Print name, address, city and state plainly. Use enclosed envelope and make remittance to the Interstate Resort Organization. If you send currency, please register letter for safety.

Very truly yours,
INTERSTATE RESORT ORGANIZATION
EL:EH E. HJELMER

Another trick which has been used, and which can be applied to either one of the two types of procedure outlined above, is to send out "Trade Discount Bonds" with a face value of $200 or $300. These are very imposing documents and their face value can be applied on the purchase of any lot in the subdivision. Of course, the lots are priced high enough that even after the discount has been deducted the purchaser pays more than he would for a similar lot from a legitimate subdivider. However, he has learned that his name is of considerable advertising value in the community; he has received a "gold bond"; and he is getting his lot at a discount. So he is well pleased . . . until he tries to sell the lot and cash in on the great increase in value which the salesman promised. Exhibits IV and V give examples of a typical "gold bond" and letter accompanying.

EXHIBIT IV.

Phone 3196

METRO REALTY CORPORATION
Developers of
"MEADOW VIEW"
Choice of the Home Builder
322 Elyria Savings and Trust Building
Elyria, Ohio

July 23, 1925.

Mr. A. B. C.,
Cedar Pt., Rdway,
Sandusky, Ohio.

Dear Mr. A. B. C.:

In order to place on our books several individuals through whose aid we will find it possible to secure additional business; we have made a selection of names from different localities, who we feel carry weight and have prestige in their community.

We are pleased to advise that your name is among those chosen, and you are therefore entitled to the unusual offer explained in the enclosed $200.00 certificate.

Take a step in the right direction by immediately making plans to come to our Elyria office, at our expense; and get a foothold on one of the fastest moving developments outside of Elyria.

"MEADOW VIEW," being located just one mile South of Elyria city limits, on the Chicago Buffalo State Highway, Route No. 2, and opposite the beautiful Elyria Country Club grounds, will soon be dotted with homes of many Clevelanders. Why? Because the proposed Rapid Transit will establish a twenty-five minute service from Elyria to Cleveland public square.

This fact alone should give you an idea what your Two Hundred Dollar lot will soon be worth, which lot you are now offered for a total cost of only $42.00.

Act now while this is fresh in your mind and let us know by return mail when we may expect you.

Very truly,

METRO REALTY CORPORATION

JJW:FEU J. J. WEISS, *Manager.*

P. S. Office open until 8 P. M. week days and all day Saturdays and Sundays. Kindly call on week day if possible as we can give you better attention.

"Real Estate—The Safe Investment"

Amateur Free-Lot Devices. The effectiveness of the free-lot scheme depends upon the psychology of the something-for-nothing idea. This requires considerable ingenuity on the part of the operator because he has to figure some way to get the "lucky winner" to pay out from $4.85 to $79 for a lot which is being "given" to him. The most common way of doing this, and the one which seems to have originated first, was to claim that this was for the expense of searching the title, making out the papers, etc. This worked very well at first and was sufficient where the land only cost about $20 an acre. In cases where the original payment was as high as $50 or $60 and the plan was to switch the "winner" to a higher priced lot, the lot awarded was always in the poorest part of the

EXHIBIT V

$200.00

Certificate for AT ***Building Lot***

"MEADOW VIEW"

OWNED AND DEVELOPED BY

Metro Realty Corporation

322 ELYRIA SAVINGS & TRUST BLDG., ELYRIA, OHIO

This Certificate Entitles M_____

of_____City_____

to one Building Lot ($200.00) value at "MEADOW VIEW" for ADVERTISING PURPOSES.

You will receive a general warranty deed conveying this ($200.00) lot free and clear of all encumbrances. You are required to pay ($42.00) which covers the consideration in full for the lot, staking, surveying, drawing of deed, certificate of title, services rendered by this organization and all legal work and other expenses pertaining thereto.

NOTE: This certificate will be in effect until the day you inspect the property, but not later than

1925

Dated at Elyria, Ohio, this day of 1925._____

TREASURER.

subdivision and was probably worth no more than the "title expense," so that the promoter did not lose anything if the switching tactics could not be carried out.

However, this scheme became too well known; some of the promoters actually "gave away" lots which were really worth several hundred dollars. The cost element in the plan, which seems to have been especially prevalent in the Chicago region, was to charge the "winner" from $700 to $900 for the installation of "improvements." The lots were sold on a regular land contract, the consideration being the amount supposed to be the cost of improvements, although this was not mentioned in the contract. The "winner" was so elated over having just won a lot worth $500 that he rarely read the contract over carefully. If he had done so he would have found one line of very small type which stated that the party of the first part agreed to install stone streets and cement sidewalks. After making his monthly payments for six months or so, the "lucky winner" would be elated to find that the work of putting in the improvements had begun. The streets were being graded and the sidewalks laid. After another year or so he would decide to go down to the subdivider's office and find out when the gas, electricity, sewer, etc., were to be put in. When told that the company had long since installed the "improvements," he would read his contract with considerable care. The chances were about even that within a few months the company would have the same lot to award to another "lucky winner."

The borderline between legitimate operation and use of the something-for-nothing motive is difficult to draw but there are established operators who are selling on cheapness alone, without the statement that the charge of $39 is for title expenses, relying on extravagant allegations of "location, surroundings, the certainty of future growth and increased value, which makes it ideal either as a homesite or as an investment" plus the cheap price to effect the sale. The switching aspect is approximately the same as in the general free-lot scheme, but the procedure makes control increasingly difficult, since this selling differs but slightly from many of the practices condoned in the subdividing of more valuable tracts by so-called "ethical" subdividers. It is sometimes very difficult for a man to buy his cheap lot, although they will sell it to him if he insists. Cases are known where continued procrastination in the delivery of the deed was resorted to in order to discourage his attempt to secure title to the bait lot.

The methods of control and the agencies which exercise them will be discussed in the second installment of this article which will appear in the August issue of the *Journal.*

DEPARTMENTS

The departments of the JOURNAL are edited specifically with regard to their interest to the readers who are especially concerned with the economic problems of land and public utilities. For the most part the material for the departments will be prepared by members of the staff of the Institute for Research in Land Economics and Public Utilities.

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SUMMARIES OF RESEARCH

PUBLIC UTILITY FINANCING FOR THE YEAR, 1928.

THE volume of public utility financing in 1928 was below the peak of 1927 to the amount of $352,978,846, which is represented by a drop in the index number from 647 in 1927 to 570 in 1928. In only one quarter did the 1928 volume exceed the volume of financing in the corresponding quarter of 1927; in all the other quarters it was much below 1927 figures (Table I).

The total volume of public utility financing in 1928 was $2,633,525,332. This is to be compared with a total corporate financing of $7,753,040,281, with a government total of $2,174,696,489, and with a grand total of all financing in 1928 of $9,927,736,770. Expressed as a percentage, public utility financing in 1928 constituted 26.53% of the grand total, and 33.97% of the corporate total; compared with 30.26% and 40.90% respectively in 1927. Over the entire period of this record (1919–1928) public utility issues have represented 23.0% of the grand total of financing and 33.7% of all corporate financing.

New Capital. New capital requirements amounting to $1,882,717,934[1] represented 71.5% of the public utility total in 1928, compared with $2,074,474,488, or 69.5%, in 1927. For the entire period of this survey new capital issues have constituted 76.4% of total public utility financing.

Long-term bonds formed the bulk of new public utility capital issues in 1928 (50.4% of the total new issues for that year). However, stock issues were not

[1] Total from the *Commercial and Financial Chronicle* which includes some issues not carried through this analysis of individual offerings.

TABLE I. INDEX NUMBER OF VOLUME OF PUBLIC UTILITY FINANCING, 1919–1928*

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
By Months										
January	100	67	55	46	122	112	199	173	259	176
February	48	28	25	47	66	89	172	125	314	220
March	25	27	25	43	94	78	144	115	158	190
April	5	38	25	50	64	112	69	182	165	318
May	15	38	35	150	66	233	103	230	214	203
June	26	20	9	96	92	122	118	181	130	317
July	41	25	115	44	21	104	90	177	97	48
August	20	11	33	22	40	62	93	58	92	82
September	54	44	34	147	34	77	110	38	168	169
October	24	33	33	77	59	112	92	123	261	180
November	8	21	119	43	161	69	102	136	212	127
December	20	63	53	54	135	111	153	114	433	167
By Quarters										
1st Quarter	100	71	61	80	164	162	299	240	424	340
2nd Quarter	27	56	41	172	129	271	168	344	295	487
3rd Quarter	67	47	105	123	55	141	170	159	207	178
4th Quarter	30	68	119	101	206	169	201	217	528	275
By Years	100	107	145	212	246	330	373	427	647	570

*Volume for January, 1919, First Quarter, 1919, and Year 1919 used as basis for computing index numbers for months, quarters, and years respectively. Compiled from the monthly record of new capital flotations of the *Commercial and Financial Chronicle*.

TABLE II. NEW FINANCING OF PUBLIC UTILITIES, 1919–1928.

YEAR	LONG-TERM BONDS		SHORT-TERM BONDS		STOCK	
	Volume*	Percentage of Total	Volume*	Percentage of Total	Volume*	Percentage of Total
1919	$117,046,000	41.98%	$126,486,800	45.36%	$ 35,304,950	12.66%
1920	199,998,100	52.31	127,026,252	33.22	55,314,700	14.27
1921	349,975,000	71.14	24,872,000	5.06	117,087,940	23.80
1922	431,081,339	59.36	19,445,000	2.68	275,715,170	37.96
1923	588,821,471	66.31	48,712,200	5.49	250,457,058	28.20
1924	722,018,123	54.47	107,032,000	8.07	496,550,704	37.46
1925	857,787,400	57.33	117,540,000	7.86	520,771,004	34.81
1926	1,047,216,330	65.27	92,283,100	5.75	464,885,946	28.98
1927	1,209,439,510	58.30	82,427,800	3.97	782,607,178	37.73
1928	949,933,100	50.46	114,082,000	6.06	818,702,834	43.48
Average 1919–1928	647,331,637	58.05	85,990,715	7.71	381,739,748	34.24

*Par Values

far behind (43.5%), while short-term bonds and notes (i. e., five years or less) made up the small balance (Table II).

TABLE III. SIMPLE AND WEIGHTED AVERAGE YIELD AT OFFERING PRICE OF ALL NEW PUBLIC UTILITY PREFERRED STOCK ISSUES, 1919–1928.

Years	Number of Preferred Issues	Weighted Average Yield	Simple Average Yield	Percentage of Total Stock
1919[a]	7	7.48	7.16	59.8
1920[b]	13	7.23	7.38	52.2
1921 [c]	9	7.68	7.47	22.2
1922 [d]	35	7.09	7.34	41.7
1923 [e]	44	6.96	7.19	58.8
1924 [f]	87	6.93	7.09	45.6
1925[g]	96	6.70	6.98	61.5
1926[h]	86	6.73	6.74	44.3
1927 [i]	111	6.04	6.49	64.7
1928	99	5.77	6.20	45.5
1919–1928	587	6.48	6.79	51.0

a Two items omitted because of insufficient information—Total amount $3,250,000.
b Three items omitted because of insufficient information—Total amount $1,594,900.
c A total of $10,463,609 omitted because of insufficient information. Number and value of each item unknown.
d Two items omitted because of insufficient information—Total amount $5,910,000.
e One item omitted because of insufficient information—Total amount $748,386.
f Five items omitted because of insufficient information—Total amount $6,532,800.
g Six items omitted because of insufficient information—Total amount $6,685,000.
h Three items omitted because of insufficient information—Total amount $2,725,000.
i Two issues omitted—no yield given—offer 1 share of common and 1 of preferred total amount—$24,050,000.
j One item omitted because of insufficient information—Total amount $200,000.
k One item omitted because of insufficient information—Total amount $1,000,000.
l In the total for stock in 1921 appears a sum of items amounting to $13,414,880. The individual items making up this sum are unknown. The amount is distributed between common and preferred on the basis of percentage relationship of items known. Seventy-eight per cent. of total of 11 months, excluding an unusually large item of $8,900,000 occurring in common, is preferred stock. Seventy-eight per cent. of $13,414,880 is $10,463,606. This is added to total preferred stock for the 11 months. The remainder is added to the common.

Railway and electric companies led in the amount of financing, their issues being 23.5% of the new capital public utility issues for 1928, compared with 9.5% in 1927. Light and power companies were a close second with 21.3% as against 27.2% in 1927; gas and electric companies third with 17.1% compared with 28.1% in 1927; and gas offerings represented 8.8% of the 1928 total and 12.9% for 1927.

Stock Offerings Increase. As was to be expected, stocks were a large part of all public utility issues in 1928, whether for new financing or refinancing. The ratio of stock offerings to total public utility financing rose from 24.7% in 1926 and 28.5% in 1927 to 37.2% in 1928.

In the railway-electric group, it should be explained, are included those companies having electric railway properties, although the railways may represent but a small part of the whole business. In reality the group is better described in the main as electric companies with some electric railway property.

Furthermore, the railway-electric financial total was largely influenced by a few exceedingly large issues by holding companies, which are the chief source of new financing. Thus, less significance

TABLE IV. WEIGHTED AND SIMPLE AVERAGE YIELD AT OFFERING PRICE OF NEW PUBLIC UTILITY SECURITY ISSUES

YEAR	ALL TYPES OF DEBT OBLIGATIONS						BONDS AND NOTES ONLY	
	All Maturities		Long-Term		Short-Term			
	Weighted Average Yield	Simple Average Yield	Weighted Average Yield	Simple Average Yield	Weighted Average Yield	Simple Average Yield	Weighted Average Yield	Simple Average Yield
1919	6.55	6.68	6.21	6.25	6.78	7.03	6.54	6.67
1920	7.55	7.64	7.52	7.59	7.59	7.68	7.53	7.62
1921	7.13	7.47	7.11	7.42	7.27	7.66	7.11	7.45
1922	6.06	6.34	6.03	6.32	6.39	6.53	6.03	6.34
1923	6.04	6.31	5.99	6.26	6.73	6.72	6.11	6.29
1924	6.03	6.14	6.04	6.16	5.97	6.04	5.98	6.12
1925	5.58	5.81	5.66	5.83	5.55	5.86	5.56	5.78
1926	5.53	5.72	5.52	5.70	5.77	5.82	5.44	5.66
1927	5.24	5.61	5.25	5.57	5.11	5.77	5.12	5.57
1928	5.27	5.58	5.21	5.51	5.80	5.90	5.28	5.53
1st Quarter	5.09	5.52	5.08	5.45	5.52	5.94	5.14	5.49
2nd Quarter	5.15	5.46	5.13	5.42	5.54	5.62	5.15	5.41
3rd Quarter	5.66	5.82	5.57	5.74	5.95	6.15	5.59	5.76
4th Quarter	5.46	5.66	5.36	5.54	5.90	6.13	5.43	5.60

attaches to the volume of railway financing than appears from the percentage alone.

At the same time common stocks took precedence over preferred issues, the ratio of preferred to all stock offerings rising from 44.3% in 1926 to 64.7% in 1927, and declining to 45.5% in 1928 (Table III). These ratios for the separate quarters in 1928 may be summarized as follows:

	Percent. of Stock Issues to Total Public Utility Financing	Percent. of Preferred to All Stock Issues
1928—1st Quarter	21.5	76.1
1928—2nd Quarter	46.0	38.2
1928—3rd Quarter	32.3	73.0
1928—4th Quarter	44.0	28.0

Security Yields. The yield at offering price on new public utility securities changed but little in 1928 with reference to the 1927 figure (Table IV). In 1927 the yield per dollar on all maturities

TABLE V. QUARTILE DISTRIBUTION OF PUBLIC UTILITY SECURITY ISSUES, 1919–1928*

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
1st Quartile										
Range	5.30–6.16	5.88–7.10	5.50–6.25	4.70–5.50	4.65–5.62	4.70–5.60	4.30–5.30	4.50–5.10	4.15–4.85	4.40–4.80
Simple Average Yield	5.82	6.72	6.07	5.26	5.31	5.33	5.03	4.99	4.64	4.66
Weighted Average Yield	5.87	6.84	6.14	5.34	5.38	5.27	5.02	4.97	4.68	4.64
2nd Quartile										
Range	6.16–6.30	7.10–7.60	6.25–7.30	5.50–6.05	5.62–6.10	5.60–6.00	5.30–5.50	5.10–5.40	4.85–5.11	4.80–5.13
Simple Average Yield	6.22	7.38	6.98	5.83	5.91	5.85	5.44	5.26	5.01	5.00
Weighted Average Yield	6.21	7.39	6.97	5.78	5.83	5.79	5.36	5.23	5.02	5.01
3rd Quartile										
Range	6.30–7.00	7.60–8.00	7.30–7.65	6.05–6.50	6.10–6.38	6.00–6.40	5.50–6.00	5.40–6.00	5.11–5.53	5.13–5.75
Simple Average Yield	6.73	7.84	7.46	6.28	6.23	6.21	5.76	5.70	5.30	5.48
Weighted Average Yield	6.81	7.79	7.41	6.25	6.19	6.21	5.66	5.68	5.24	5.36
4th Quartile										
Range	7.00–8.00	8.00–9.32	7.65–9.00	6.50–8.00	6.38–7.50	6.40–8.00	6.00–7.06	6.00–7.50	5.53–7.40	5.75–7.00
Simple Average Yield	7.35	8.18	8.09	7.03	6.76	6.77	6.31	6.27	6.12	6.15
Weighted Average Yield	7.29	8.20	8.03	6.86	6.75	6.86	6.31	6.25	6.03	6.07
Total										
Range	5.30–8.00	5.88–9.32	5.50–9.00	4.70–8.00	4.65–7.50	4.70–8.00	4.30–7.06	4.50–7.50	4.15–7.40	4.40–7.00
Simple Average Yield	6.68	7.64	7.47	6.34	6.31	6.14	5.81	5.72	5.61	5.58
Weighted Average Yield	6.55	7.55	7.13	6.06	6.04	6.03	5.58	5.53	5.24	5.27

* Compiled from the records of the *Commercial and Financial Chronicle.*

was 5.24% and in 1928 was 5.27%, while the yield per issue in 1927 was 5.61% in 1927 and 5.58% in 1928. A quartile distribution of the volume of new public utility issues on the basis of yields is presented in Table V for the entire period, 1919–1928. Issues in 1928 falling below the first (lowest) quartile range[1] were offered to yield 4.64% on the dollar; those falling between the first quartile and the median, 5.01%; between the median and the third quartile, 5.36%; and those at yields higher than the third quartile point, 6.07%. The range in yield of all 1928 issues was from 4.40 to 7.00 (2.60%), compared with a range of 4.15 to 7.40 (3.25%) in 1927.

PETER LEININGER

[1] "Quartile range" is a term here used to indicate the items falling between the several quartile points. Thus, first quartile range indicates those items falling below the first quartile point; the second quartile range refers to the items between the first quartile point and the median; the third quartile range to those between the median and third quartile point; and the fourth quartile range to the items above the third quartile point.

COST OF RAILWAY CAPITAL, 1928

THE railroads experienced in 1928 the lowest cost of capital and of financing of any year in the period 1920–1928 (Table I).[1] Such a decline in capital costs, indicating as it does the improved credit position of the railroads, was accomplished most remarkably in a year not notable for profitable operation. Improving traffic in 1928 did not prevent a decline in gross earnings, although net earnings registered a gain largely through further reduction of expenses. This partial recovery was made on the heels of 1927, which was accounted the worst year since the return to private control and marked by a sharp decline in both gross and net earnings.

With net earnings still below the level

[1] Herbert B. Dorau, "The Cost of Railway Capital under the Transportation Act of 1920," 3 *Journal of Land & Public Utility Economics*, 1-20 (February, 1927); 3 *Ibid.*, 219–221 (May, 1927); 3 *Ibid.*, 427–430 (November, 1927); 4 *Ibid.*, 206–208 (May, 1928); and 4 *Ibid.*, 427–428 (November, 1928).

TABLE I. SUMMARY OF COST OF FINANCING EXPRESSED IN VARIOUS WAYS, BY YEARS AND FOR THE PERIOD 1920-1928.

YEAR	ALL CLASSES				BONDS				EQUIPMENT TRUST CERTIFICATES				MISCELLANEOUS			
	y-o	z/x	z/n	Yield Difference	y-o	z/x	z/n	Yield Difference	y-o	z/x	z/n	Yield Difference	y-o	z/x	z/n	Yield Difference
1920....	3.66	3.66	3.80	.52	3.47	3.47	3.59	.50	3.98	3.97	4.13	.56	.....	.....	.....	.....
1921....	4.38	4.51	4.72	.47	4.54	4.68	4.91	.50	2.44	2.44	2.50	.08	2.68	2.78	2.86	.39
1922....	3.25	3.36	3.48	.29	3.55	3.69	3.83	.26	2.28	2.30	2.35	.35	.....	.....	.....	.....
1923....	2.54	2.59	2.66	.32	2.65	2.74	2.82	.16	2.55	2.58	2.65	.38	1.51	1.52	1.55	.67
1924....	2.67	2.73	2.80	.24	3.16	3.26	3.37	.23	1.86	1.88	1.91	.08	1.71	1.71	1.74	.86
1925....	2.49	2.55	2.62	.24	2.74	2.82	2.90	.23	1.75	1.76	1.79	.31	4.75	4.80	5.04	1.20
1926....	2.23	2.28	2.34	.20	2.62	2.69	2.77	.18	1.48	1.50	1.52	.24	1.00	1.01	1.02	.54
1927....	2.39	2.46	2.53	.16	2.60	2.70	2.77	.16	.66	.66	.66	.10	2.00	2.02	2.06	.74
1928....	2.17	2.22	2.27	.14	2.33	2.38	2.44	.13	.64	.64	.65	.10	1.75	1.76	1.79	.65
1st Q..	2.02	2.05	2.10	.14	2.19	2.23	2.28	.12	.56	.56	.56	.09	1.75	1.76	1.79	.65
2nd Q..	2.32	2.38	2.44	.13	2.47	2.54	2.60	.13	.67	.68	.68	.11	.....	.....	.....	.....
3rd Q..	3.00	3.06	3.16	.17	3.00	3.06	3.16	.17	.....	.....	.....	.....	.....	.....	.....	.....
4th Q..	2.16	2.20	2.25	.13	2.29	2.33	2.39	.14	.78	.64	.80	.13	.....	.....	.....	.....
1920-28.	2.75	2.82	2.90	.26	3.05	3.14	3.24	.24	1.98	2.00	2.04	.25	1.70	1.71	1.74	.77

y-o is the difference between average price per hundred received by the company and the average price per hundred paid by the investor.

$\frac{z}{x}$ – Ratio of the banker's share to the value of the issue or issues at the price at which the investor absorbed them.

$\frac{z}{n}$ – Ratio of the banker's share to the actual dollars received by the company.

Yield difference—difference between yield per dollar to maturity at price to the company, and at price paid by the investor.

TABLE II. RELATION OF COST OF FINANCING TO TOTAL COST OF CAPITAL AND TO RETURN EARNED ON INVESTMENT.

YEAR	COST OF CAPITAL								RETURN EARNED ON	
	All		Bonds		Equipment Trust		Miscellaneous			
	Cost of Financing*	Cost of Capital†	Cost of Financing*	Cost of Capital†	Cost of Financing*	Cost of Capital†	Cost of Financing*	Cost of Capital†	Investment	Stock
1920	.52	7.29	.50	7.34	.56	7.28	.....	7.01	.06	5.45
1921	.47	7.21	.50	7.23	.08	6.76	.39	7.64	2.96	3.94
1922	.29	5.86	.26	5.92	.35	5.71	.....	6.00	3.74	4.85
1923	.32	5.61	.16	5.38	.38	5.72	.67	6.45	4.56	6.95
1924	.24	5.54	.23	5.61	.08	5.27	.86	6.11	4.44	6.70
1925	.24	5.45	.21	5.63	.31	5.06	1.20	5.20	4.89	8.19
1926	.21	5.24	.18	5.36	.24	4.97	.54	5.26	5.15	9.43
1927	.16	5.06	.16	5.16	.10	4.61	.74	5.68	4.41	7.78
1928	.14	4.78	.13	4.77	.10	4.58	.65	5.25	.....	.....
1st Quarter	.14	4.73	.12	4.71	.09	4.37	.65	5.64	.....	.....
2nd Quarter	.13	4.72	.13	4.75	.11	4.43	.....	4.71	.....	.....
3rd Quarter	.17	5.05	.17	5.10	.....	4.86	.....	5.67	.....	.....
4th Quarter	.13	5.00	.14	4.95	.13	5.02	.....	5.84	.....	.....
1920–1928	.26	5.57	.24	5.62	.25	5.38	.77	5.94	3.86	6.70

* Difference between yield per dollar to maturity at price to the company, and at price paid by the investor.
† Yield per dollar on securities for which price to the company is available.

which will yield the return on investment allowed by the Transportation Act, the over-all cost of new capital to the railroads, for the first time in eight years, fell below 5%, the exact figure being 4.78% in 1928 as against 5.06% in 1927—a difference of .28%. At the same time, cost of financing fell .02% to a low figure of .14% for all types of securities.

Both of these over-all figures reflect the predominance of bonds and equipment trust certificates in railway financing. The cost of bond capital was 4.77% in 1928 against 5.16% in 1927, a difference of .39%, and the cost of equipment trust capital reached 4.58% against 4.61% in 1927, a difference of .03%.

Cost of financing for bonds in 1928 was .13% compared with .16% in 1927; and for equipment trust certificates was .10% in both 1928 and 1927.

The demoralization of the bond market during the second half of 1928 is reflected in the sharp increase in cost of capital and cost of financing in the third and fourth quarters. From 4.73% in the first quarter, the over-all cost of capital rose to 5.05% in the third, and 5.00% in the fourth quarter, compared with 4.78% for the whole year and with 5.06% for the year 1927. A similar increase was shown in cost of bond-capital and cost of capital secured by equipment trust certificates, the latter rising in the fourth quarter to 5.02 which is higher than any figure since 1925.

At the same time the heaviness in the bond market brought the cost of financing in the third quarter as high as .17% for all securities. The cost of financing for bonds in that quarter was the same figure (.17%), the highest since 1926.

Table II gives the comparative cost of financing computed by different methods, elaborated in the original article.

HERBERT B. DORAU.

COMMENTS ON LEGISLATION AND COURT DECISIONS

THE INTERBOROUGH AND COTTON GIN DECISIONS OF THE UNITED STATES SUPREME COURT

IN an earlier issue of the *Journal*[1], we have pointed out the growing tendency among public utilities to go, sometimes precipitately, into the *federal* courts for relief from orders of state commissions, ignoring the review afforded in the *state* courts under state statutes. This tendency seems to have suffered a set-back by the recent decision of the United States Supreme Court in *Gilchrist et al.* v. *Interborough Rapid Transit Company*, decided April 8, 1929.[2]

The Interborough Rapid Transit Company had petitioned the Transit Commission of New York City for an increase in subway fares from five to seven cents. The Commission had taken the position that it was without jurisdiction to grant such a request, since the contracts between the City and the Company under which the subways were constructed provided for a maximum fare of five cents. That this was its position the Commission had made clear on two occasions, prior to the filing by the Company, on February 1, 1929, of a schedule calling for a seven-cent fare. Two weeks later and before the Commission had passed upon this application the company filed its bill in a federal court, asking for an injunction to prevent interference with the charging of a seven-cent fare. The bill alleged that a five-cent fare was too low, resulting in confiscation of the property of the company.[3] An hour or so later the Commission entered an order, again disclaiming power to permit a seven-cent fare. A few minutes later the City and the Transit Commission began proceedings *in the state courts* to prevent the Company's putting the seven-cent fare into effect. These proceedings were stayed by the federal court, in an ancillary order, and upon hearing (upon affidavits only) the three-judge federal court granted an interlocutory injunction under which the Company was authorized to put the seven-cent fare into effect. This order was predicated upon a finding of confiscation, and the conclusion that the contracts were not "inviolable." The United States Supreme Court stayed the order, pending a hearing before it.

The Supreme Court has now held that this injunction was granted prematurely and improvidently. Whether the Transit Commission had jurisdiction or whether the contracts did prevent its acting were matters of state law, and the federal court, the opinion declares, should not have interfered with a state determination of local law.

It seems safe to draw the following conclusions from this opinion:

[1] "National Courts and Local Utilities," 4 *Journal of Land & Public Utility Economics* 318–320 (August, 1928).

[2] 49 Sup. Ct. 282. Mr. Justice Vandevanter, Mr. Justice Sutherland, and Mr. Justice Butler dissented.

[3] In supporting the claim of confiscation, the Company claimed a return on the total value of subways and equipment, although part of this property belonged to the City. The Court said on this point: "The claim for an 8% return upon the values of subways, which are the property of the city and distinctly declared by statute to be public streets (case cited) is unprecedented and ought not to be accepted without more cogent support than the present record discloses."

1. That before a federal court should take jurisdiction it must appear that the utility has applied to the state commission for relief, and that the commission has passed upon the application (or has delayed unreasonably in passing upon it), and that its action is "improper."

2. That the federal courts are warned against interferring with the "orderly" determination of state law in state courts.

The legal nature of a commission certificate of convenience and necessity is not wholly clear,[4] but the decision of the United States Supreme Court on February 10, 1929, in *Frost* v. *Corporation Commission*,[5] throws considerable light upon a subject of constantly increasing importance. Frost had been granted a permit by the Oklahoma Commission to operate a public utility cotton ginning plant, under a statute which authorized such a permit to issue only upon a showing that public necessity required the proposed operation. This permit expressly protected Frost against competition in his community from a second plant, unless such competitor could show a public necessity for his entry into the field. The legislature in 1925 amended the law by making it mandatory upon the Commission to issue a permit to a *cooperative* ginning company, *without a showing of public necessity*, provided 100 residents signed the petition for such permit. The purpose of Frost's action was to prevent competition from a cooperative company,[6] operating under such a permit.[7]

The United States Supreme Court held that Frost's permit was a franchise and a property right. He had not, it is true, been granted an *exclusive* franchise, for it was within the Commission's power to grant other permits, upon a showing of public necessity. But his right did extend to preventing competition except under a valid permit. And the permit issued to the cooperative, the Court held, was invalid since the classification between cooperatives and others was not based upon a reasonable difference between them.

It is hazardous to generalize too freely upon the basis of any decision in the field of public utility law, particularly where, as here, two strong dissenting opinions have been filed, concurred in by three judges. But this much may be said:

1. A certificate of convenience and necessity, even though revocable by a commission, is not a mere permit but a property right.

2. Even though a certificate does not grant full protection against competition, it does prevent competition except under reasonably similar conditions precedent.

3. Unauthorized competition with the holder of a valid certificate is not only an offense against the state, but an invasion of the property rights of the certificate holder, against which he may secure relief upon his own motion.[8]

DAVID E. LILIENTHAL.

[4] The authorities on this point are collected and discussed in David E. Lilienthal and Irwin S. Rosenbaum, "Motor Carrier Regulation by Certificates of Convenience and Necessity," 36 *Yale Law Journal* 163, 168 (1926).

[5] 49 Sup. Ct. 235.

[6] *Editorial Note:* In the majority opinion the "cooperative company" was described as "in no sense a mutual association." The whole treatment of the nature of this company suggests a departure from, or at least an underweighting of, the previously sanctioned policy of encouraging cooperative enterprises, especially among farmers. Mr. Justice Brandeis in his dissenting opinion gives greater weight to this point. Does the opinion of the majority indicate a change of attitude or policy toward cooperative ventures? E. W. M.

[7] Though the date of granting Frost's permit was not disclosed in the opinions, presumably it was prior to the 1925 amendment favoring cooperative organizations.

[8] This point has been well recognized in decisions of the state courts. We have collected many of the cases in note 120 of the article in the *Yale Law Journal* referred to above, note 4.

THE UNITED STATES SUPREME COURT PASSES ON FEDERAL TAX EXEMPTION OF BUILDING AND LOAN ASSOCIATIONS

THE Supreme Court of the United States has laid down some rules to be followed by the Bureau of Internal Revenue in dealing with the exemption of mutual building and loan associations from Federal income taxation.[1] Although the decision resolves some of the questions of controversy between the Internal Revenue officials and individual building and loan associations claiming exemption, it does not settle all such problems.

The Federal Revenue Acts since 1918 have exempted building and loan associations on the assumption that corporations which operate upon a mutual or cooperative basis should be encouraged. The Supreme Court opinion involves the Revenue Act of 1918 which exempted from taxes "domestic building and loan associations and cooperative banks without capital stock organized and operated for mutual purposes and without profit." The provisions of the present Revenue Act are virtually the same as those in the Act of 1921 which introduced, as in the following quotation, a slight modification of the original exemption: "Domestic building and loan associations, substantially all of the business of which is confined to making loans to members and cooperative banks without capital stock organized and operated for mutual purposes and without profit." It is argued by building and loan operatives that "corporations with cooperative capital could not afford to pay the rates of Federal income taxation. It would tax practically their entire gross income and so reduce earnings as to cause shareholders to withdraw from the business, and would mean the practical annihilating of cooperative business enterprises."[2] The writer is in sympathy with the encouragement of the cooperative enterprise, but feels that the essential characteristics of the old-time building and loan association must be studied in classifying many of the present associations. These essential characteristics are: (1) purpose, and (2) mutuality. The making of loans to members to alleviate housing conditions is the essence of the purpose, while mutuality involves the equal distribution of association incomes derived from this form of cooperative lending. The importance of these factors will appear as the case at hand is studied.

This case involved taxes paid under protest from the years 1918 through 1923. It was argued before the Solicitor of Internal Revenue in August 1924 and an adverse ruling received. Later the case was carried to the Court of Claims and on June 6, 1927, the Court decided in favor of the Company and entered judgment for the entire amount of taxes paid, plus the interest. The government carried the litigation to the Supreme Court where it was argued on October 23 and 24, 1928, and decided on November 19, 1928.

The Cambridge Loan and Building Company is a duly incorporated building and loan association in Ohio, conducting its business in accordance with the laws of that state. As the Federal Revenue Act does not define building and loan

[1] *United States, Petitioner, v. The Cambridge Loan and Building Company*, 49 Sup. Ct. 39 (November 19, 1928).

[2] Horace F. Clark, "Cambridge Decision Confirms Exemption of Mutuals", 3 *Bulletin of the American Savings, Building and Loan Institute* 4 (December, 1928).

associations other than in the terms above quoted, the Court held that qualification in form under the state laws was sufficient.

The Court was fully informed as to the rudimentary purposes and mutuality of building and loan associations. The Government based its argument on the rigorous interpretation of these two fundamentals. The Government counsel further maintained that when an association enlarges its operations and lends money to individuals engaged in speculative building and to persons who will not use and occupy the premises the association has lost its quasi-public character which should be the only justification for exemption from taxes.

The funds of the Cambridge Company are derived largely from deposits by persons who are not members in the sense of having proprietary interests evidenced by stock ownership. Interest is paid upon these deposits at rates ascertained previous to annual profit and loss calculations. The Court stated that this form of acquiring money and paying for it does not violate the quality of mutualness because such associations in order to start have to have money to lend and the typical member does not have it.

The loans made by the Cambridge Company during the first part of the period under consideration were made to persons who were not members in the sense of holding capital stock in the association. After the passage of the 1921 Act with the "making loans to members clause" the borrower was required to subscribe to a nominal amount of stock regardless of the amount of his loan. Obviously this is technical compliance with the law and the operations of such an association verge on commercial banking unless it can be shown that the income from these operations was redistributed to borrowers and stockholders alike.

Some building and loan operators will insist that, if the borrower is given the benefit of a direct reduction in his loan, such reduction constitutes substantially a distribution of profits at a rate equal to the interest rate charged on his loan. It is admitted that a member receiving this benefit in this manner does not find a dividend credited to any share accumulation which he may have on the books. The loan is made at a set rate, which rate represents the cost to the borrower. (Of course, the loan expenses, commission and other fees must be added.) We do not believe that a mathematical distribution is cared for by the reduction of the loan because the amounts given the borrower in this manner are not functions of the earning capacity or actual earnings of the company. If this arrangement results in dividends to all depositors and stockholders at substantially the same rate, we will not question the substantial mutuality nor advise against the 1% to 2% spread between the rate of dividend and the interest rate charged on loans.

The Court found that dividends are distributed to all members at an equal rate. This is probably the saving fact in the Cambridge case, although the Court might have questioned the mutuality of such distribution of dividends had it investigated the opportunities which were presented to borrowing members to purchase stock in the association. The writer is familiar with a few associations using more than one class of stock, in which control resides in a very small group and from which earnings have been taken by such individuals representing from 8% to 20% on capital invested.

The Court says that "very possibly the Company has strained its privileges

to near the limit" and although the justices held that no taxes were warranted, they stated "the rights of the Company were pressed somewhat far." Associations which are not operated on a purely mutual basis cannot hope that no further occasions for judicial treatment of the operations of the associations will arise. The current decision in overruling the "use and occupancy" ruling of the Bureau of Internal Revenue indicates clearly that the building and loan association may engage in any and all types of real estate lending. It is only logical to expect that banking and insurance interests who are meeting continually the competition of building and loan lenders will press the issue of tax exemption at the first opportunity. The Court states: "When Congress exempted such associations from the income tax it was speaking of existing societies that commonly were known as such, not of ideals that would have been hard to find." Building and loan operatives may find consolation in this statement for the departures from purpose and mutuality which have been made. It is wise for them to consider, however, that Congress had a more ideal association in mind than one whose principal profits are taken by an inside group or even single officials. The building and loan association in many cases is substantially a commercial real estate banking enterprise which has received special favors because of the sentiment surrounding home ownership and the worthy desire of legislators and others to encourage the accumulation of funds for housing.

Very few states permit associations to receive deposits. Most Ohio associations receive the bulk of their funds from deposits, and it seems fairly clear from the decision that the presence of deposits where profits are equitably distributed to members is not a barrier to exemption. The Court might have insisted appropriately that as the associations claim tax exemption on the basis of their cooperative character they should present all receipts regardless of their character in their reports to the state. Cases are known where appraisal fees, abstracting charges and even commissions ranging from ½% to 5% are allocated to ex-officers without ever appearing in the accounting record submitted to the state departments. The writer is not sure that the Cambridge decision represents sound government policy in connection with building and loan taxation and that those associations which are not operating on a strictly mutual plan can recline in smug security from Federal income taxation.

H. Morton Bodfish.

BOOK REVIEWS

Hines, Walker D. WAR HISTORY OF AMERICAN RAILROADS. *New Haven: Yale University Press, 1928. pp. xviii, 318. $3.75.*

The Carnegie Endowment for International Peace through its Division of Economics and History has set up, as one of its tasks, an investigation and analysis of the economic and social history of the World War. A series of monographs is planned which shall contain authoritative, though unofficial statements of the economic history of different phases of the War. The editor of the series describes these monographs "as about halfway between memoirs and blue-books."

An account of the control and operation of the American railroads is essential in a protrayal of the country's economic history during the period of the War. No one could have written the war history of American Railroads with greater authority than Mr. Hines. From the time the railroads were taken over by the Federal government in 1918 he was assistant director-general and after Mr. McAdoo's resignation as director-general in 1919 Mr. Hines served in that capacity until 1920, when the period of government operations came to an end and the railroads were returned to their owners.

The first two chapters may be regarded as an introduction. In these are summarized the conditions pertaining to railroad operation and regulation prior to the outbreak of the war and to the experiences of the Railroads' War Board which attempted to bring about more unified and coordinated operation of the country's railroad lines during the year 1917. The Board found its task practically hopeless. The practice of "tagging" shipments for the government and thus giving them preference over other shipments resulted in a vast amount of government freight rushed forward to destinations irrespective of the consignee's ability to receive and unload the goods. Great traffic congestion was the natural result. One example cited is the shipment of materials from various points in the country to Hog Island shipyards long before any railroad tracks were constructed at that place for unloading such cars. Car shortages were inevitable and not only interfered with the transportation of war materials for the government but also clogged up the ordinary channels of trade.

Chapters III to XIII are devoted principally to the organization and functions of the railroad administration. The establishment of unified control and operation reduced car shortages and speeded up the movement of traffic. In 1918 the railroads also handled a larger passenger traffic than in any previous year, largely accounted for by the movement of troops.

From time to time discussions and controversies have arisen as to the maintenance of the various classes of railroad property during this period of Federal control. Mr. Hines points out that the Railroad Administration's policy in this respect was different prior to the Armistice than it was during 1919. Up to the Armistice the railroads had to be maintained, in spite of the scarcity of labor and materials, so as to keep them in the best possible condition to handle the war traffic. After the war the Director-General felt that his responsibility with respect to maintenance was fulfilled when the property was kept in

such condition as to provide for safe transportation. The government clearly felt that if the railroads were turned back to their owners in an undermaintained condition the railroad companies could recover but that the government would find it difficult to collect from the carriers for overmaintenance. Considering the various classes of property, Federal control ended with an undermaintenance of way and structures, of passenger cars, and also probably of freight cars; locomotives on the average were in better condition than they were at the beginning of Federal control. At the time of settlement the railroads presented claims for undermaintenance of their properties which aggregated $678,000,000; these were settled for $203,000,000. Without going into any of the accounting intricacies it may be said that the government's settlement showed less than 11% deficiency in maintenance of way and structure and less than 2% in equipment. The assertion frequently made that the government had returned the railroads in a physically broken-down condition remains unproved. That the railroads were not in a broken-down condition is further proved by the fact that in the autumn of 1920, five months after government control ended, they moved the largest volume of traffic that had ever been offered for movement.

The labor problems and policies of the Railroad Administration are discussed in considerable detail. The efficiency of railroad labor before, during, and since Federal control has been a much debated topic. The author concludes that the general average of railroad efficiency as measured by the productivity of employees makes a favorable comparison with the pre-war efficiency and "compares with post-war efficiency fully as well as does industrial war-time efficiency with post-war efficiency." There is also general denial that the number of railroad employees was expanded by the Railroad Administration from political motives.

The author enters into an extended defense of the Railroad Administration for not making a more substantial increase in rates during the period of Federal control. Although an increase of approximately 25% in rates was authorized in 1918, the Administration felt that it was not in a position to grant additional increases in the post-Armistice period because such a move might constitute a serious disturbance to business. There was also a refusal to make any further wage increase. The position of the Administration with reference to these two problems and the difficulties involved are set forth in a convincing manner.

The net cost of Federal control of the railroads amounted to $1,123,500,000 as of December 31, 1924. Over half of this sum was accounted for by the shortage of net railway operating income of Class I railroads. The total figure measured the ultimate burden which rested upon the public treasury. In the mind of the author there is no basis for assuming that this so-called "cost of government operation" would not have existed if private operation had been continued during the period of the War. The shipping public would have had to bear it or it would have had to come out of security holders. The burden was a part of the war burden and was met through taxation as other war burdens were met.

Mr. Hines agrees with most students of the situation that the Federal control of railroads during the war period and immediately thereafter does not furnish a reliable argument for or against a general policy of government ownership and operation. "Opponents of government

ownership and operation of railroads," he says, "have frequently seemed prone to exaggerate criticisms of Federal control by way of argument against permanent government ownership and operation. Advocates of government ownership and operation have probably been equally prone to exaggerate commendable things which were done by Federal control by way of argument for their position. Both sides have been in error."

The last 80 pages are devoted to appendices to the various chapters which contain valuable information and statistical data supporting the statements made in the text. This book may well be regarded as a chapter in a comprehensive treatise of the economic conduct of the Great War.

HENRY R. TRUMBOWER

Pink, Louis H. THE NEW DAY IN HOUSING. *New York: John Day Co., 1928. pp. xiv, 208. $3.50.*

One who wants to learn something of the history and present position of housing in European and American cities will find this book an excellent introduction; well written, nicely illustrated, not burdened with charts and tables, but yet definite and factual. Whoever seeks further help in the investigation of one aspect of what former Governor Alfred Smith terms in his introduction "the one admitted failure in dealing with the social problems of American life" will not obtain an exhaustive discussion in Mr. Pink's book but he will find stimulating ideas and suggestions.

After a short history of housing in the larger American cities approximately one-third of the volume is descriptive of the outstanding attempts at housing betterment in Europe. The failures as well as the successes are presented, and the survey covers practically all of the better known work—garden cities both English and Continental, governmental subsidies, credit extension, municipal enterprise in building, modern architecture, and large-scale construction. No panacea is discovered and an appreciation of European conditions is shown by the insistence on judicious examination before trying to take over the successful methods of European cities. The remainder of the book analyzes New York's projects since the War and the reader soon realizes that Mr. Pink's service on the State Board of Housing and in other civic enterprises has given him a vantage point from which to view the schemes which vary from excess condemnation to cooperative housing by labor groups. If one feels that New York City is trying again to masquerade as the United States, he would do well to remember that not only is Mr. Pink dealing with the facts he knows most thoroughly, but that New York presents many of the economic problems of housing in their most acute form and, furthermore, that it is the only large American city in which housing has occupied a major position in the public attention since the distressing shortage of 1919–1921 which sent prominent citizens in most cities rushing about crying out against the "rent profiteer" and demanding protection by courts and commissions.

Mr. Pink stresses three things. No recent housing project in any large American city has succeeded in reaching below the "white-collar" or skilled-mechanic income classes. He does not, however, probe the implications of such a fact on our much advertised "prosperity." He insists that blighted districts and slum areas can only be dealt with in a wholesale manner and, in general, feels that the greatest promise for the future lies in private enterprise modified by appeals to public spirit and

limited dividends and aided by governmental action in either tax exemption or cheap loans. Perhaps it is asking too much to expect a more adequate discussion of the possibilities of planning and zoning, building codes, or the underlying problem of city structure and arrangement.

The tone of the book is hopeful but not blatantly optimistic. It deserves wide reading and the compliment of further works on some of the many lines which it opens up so well.

COLEMAN WOODBURY

H. S. Raushenbush and Harry W. Laidler. POWER CONTROL. *New York: New Republic, Inc., 1928. pp. x, 298. $1.00*

This is a valuable book for reading, study, and discussion, for it marshals in very readable fashion many of the criticisms of current practices in regulating and operating electric utilities and offers a corrective program. The authors are highly critical of existing private owners and operators of electric utilities, less critical of regulatory officials, and least critical of the principle of public ownership. The book serves, therefore, as an antidote for the more voluminous literature of "glorification." Because directly or indirectly almost everyone has some stake in the production and sale of electricity, whether as actual or potential user, investor, or owner, the need is imperative for clearer understanding of the intricate network of relationships which the astonishing expansion of this newest form of power has brought. We need discussion of all sides of these complicated questions.

The subject-matter of the book can be readily divided into four parts: (1) The introduction and first chapter are devoted to a description of the prevailing philosophy of business men as contentment with "things as they are" and of the extent and significance of the achievements in power engineering: (2) the next four chapters contain the criticism of private owners and operators and of regulatory officials; (3) three chapters are given to existing and proposed public ownership projects; and (4) a final chapter summarizes the authors' program for "recapturing control" of electric utilities in the interest chiefly of residential users.

The indictment of the electric utilities begins with their so-called "public relations" activities. In describing colorfully the various methods and channels of influencing public opinion, reliance is placed chiefly on incidents which subsequently have been covered in extended and duplicated detail by the Federal Trade Commission. It is well to bear in mind that intent and motive are slippery things to define and the line between legitimate advertising and propagandizing is hard to draw at a point satisfactory to all. Who is to judge whether a given action is merely an attempt to increase sales and thus diminish the unutilized capacity which is an inevitable problem from the nature of the electric industry? Certainly, however, the gross cases deserve censure, and in the long run the industry itself will profit from a reminder every now and then of its responsibilities to the public.

That part of the indictment dealing with "concentration of control" through the holding company device relies in large measure on facts disclosed in the earlier investigation by the Federal Trade Commission. The authors apparently feel that pyramiding and great size are in themselves menacing to consumers' interests, for they lead inevitably to over-capitalization and thence to excessive promoters' profits, higher rates or a postponement of rate reductions. That pyramided financial control and huge industrial combinations in-

volve grave danger of abuses is unquestioned, but that evil results are unavoidable is open to some question. Again the problem is where to draw the line, for ascertaining which we lack suitable objective standards. To the reviewer the present holding company activity appears as a natural stage in the development of the industry from a small-scale, independent, local plant basis to a large-scale, centrally-managed and controlled, mass production and "chain-store" basis. As with all rapidly expanding industries, the opportunities for promoters are great. The reviewer wishes the authors had given more space to defining the legitimate scope of promoters.

Moreover, on the question of over-capitalization, more attention might have been given to the methods by which an over-issue of holding company securities is being made good and the relation thereto of service corporation fees. Again, on what basis should the reasonableness of management, engineering, construction, financing fees be judged? Other questions might be raised, such as different ways of duplicating these charges, but the above will suffice. The authors' discussion of this subject will have served at least one good purpose if it prompts utility executives to be less secretive about some of these intercorporate relations and contracts.

In the chapter on rates, the main thesis is that, although average rates have decreased, the decline has not been as great as it should have been, considering the increased net income. Moreover, the differential between lighting and power rates unduly favors power consumers. "In summary it may be said that the electrical industry has failed to make its case, that the benefits of recent developments have accrued primarily to the consumer through cheaper rates and to the producer through higher wages."

The lack of authentic, up-to-date, general statistics of rates is a handicap to all investigators in this subject. The authors rely chiefly on Census data and figures published by the National Electric Light Association. The quoted figures of average rates for different classes of customers are not altogether satisfactory, as the authors themselves recognize. However, the authors deserve commendation for stressing the idea that the design of rates is a method of social control, although it is regrettable that they did not explore further the proper bases for differentiated rates. There is altogether too much speculative discussion of power vs. lighting rates, and too little objective analysis on the basis of facts.

If the electric utilities have not treated the residential consumers fairly, the logical conclusion is that our present regulatory agencies have broken down and "cannot be depended on as any adequate protection to the consumer." This failure of state regulation is attributed to several causes: (1) Improvident contracts between holding and managing and operating companies; (2) recapitalizing operating companies on the basis of excessive prices paid by holding companies; (3) padding expense accounts in ways which regulatory officials cannot check; (4) withholding from commissions the power to initiate investigations; (5) the use of hypothetical reproduction costs in ascertaining a rate-base; (6) immunity of interstate transfers of power from regulation.

Unfortunately the reviewer has insufficient space to comment in detail on this indictment, but, on the basis of present information, it seems extreme at several points. The exemption of interstate power transfers is indeed a gap

in regulation. The judicial standard of valuation also is a handicap (for which the state commissions are only partly responsible), but a modification may reasonably be expected. The commissions' lack of initiatory power is, where it exists, an obstacle which the commissioners themselves often realize. A more serious criticism of the commissions would be the failure to act where power to act on their own motion has been granted.

The first three counts in the indictment of the commissions, though believed to be too strongly phrased, nevertheless have substantial foundations. Only the first two points will be mentioned here. The ruling of the United States Supreme Court regarding management service contracts, which the authors note, is unfortunate from the point of view of regulation, but it has not stopped the Wisconsin Commission, for example, from interposing a limited check on such contracts. To say that the commissions have "no power" over such contracts is too sweeping and can only be justified by the need for emphasizing the serious lack of complete jurisdiction.

Similarly in the discussion of overcapitalization, the impotence of the commissions seems over-emphasized. True, the commissions lack direct control over issues of holding company securities and approximately only half of the commissions have authority over operating company security issues. These are serious limitations. But where authority is given, some commissions, like that of California, have checked decidedly extravagant capitalizations, though undoubtedly they have not caught all abuses of this character owing to their limited jurisdiction. One difficulty seems to be that in a rapidly expanding industry the benchmarks of what constitutes a reasonable capitalization of past or expected appreciation are obscure and the desirability of prohibiting any capitalization of expected economies has not been thoroughly discussed. Another difficulty appears to be the almost exclusive reliance of many commissions upon the valuation of assets. On this score the Massachusetts method of controlling liabilities, as far as it goes, has many advantages.

The remainder of the book, excepting the last chapter, deals with the experience of publicly owned plants or projects. The central themes are that public ownership is useful as an experimental "measuring stick" to determine the reasonableness of prices and practices of privately owned utilities, and that existing publicly owned establishments are not failures as their opponents declare.

In the last chapter, "The Recapture of Control," five remedies are suggested: (1) Encourage public ownership as an experimental "measuring stick" and "rate index"; (2) contract with new companies to establish the investment standard of determining the rate-base; (3) agree with established companies upon a fixed and certain figure for past investments, applying the investment standard thereafter; (4) "re-establish" control over holding and management companies; (5) exercise Federal authority to regulate the interstate wholesaling of power. "When these five things have been done, regulation of the power industry under private ownership will have been re-established about to the point where it now is in Massachusetts . . . The friction inherent in the present situation will have been reduced to a point where we can look at the planning of the industry for the future with a somewhat more impartial eye than we can now, when we are sure that every

single step toward consolidation and concentration means an overcapitalization, at our expense, of every engineering economy obtained."

These suggestions have been made before, but they deserve re-emphasis in the interest of general discussion. Most forward-looking citizens will agree that the above proposals merit trial or at least thorough discussion in the attempt to adapt our regulatory powers and agencies to fit the new structure and scope of the electric light and power industry. Some readers of this book, like the reviewer, will dissent from too-sweeping statements, although they will duly value the cogent style and analysis.

E. W. MOREHOUSE.

BOOK NOTICES

Flapan, Israel. REAL ESTATE: QUESTIONS AND ANSWERS. *New York: Prentice-Hall, Inc. pp. xiv, 324. $5.*

Those who are interested in the real estate business, either as practitioners or as students participating in the development of thought and literature concerning this field, welcome every contribution that evidences a painstaking hand. The task which Mr. Flapan essayed is not a modest one. He proposes to present briefly the principal legal relationships involved in the use and transfer of real estate. Although Mr. Flapan is a legal practitioner and approaches real estate problems through the tools of his profession, his description of these relationships may be readily used by the layman and by the real estate worker. However, the book is designed primarily to aid those who wish to pass oral or written examinations, such as are required in some states to qualify for a broker's or salesman's license.

The book is divided into eight sections containing discussions of brokers and salesmen, agency, contract, conveyance by deeds, bonds and mortgages, landlord and tenant relations, general encumbrances, and a final section into which is pushed a number of interesting but brief comments on recording, zoning, assessments, escheat, and Torrens registration—to mention only a few. Each section first contains a brief outline of its subject, followed by questions asked and answered. The care taken by the author in preparing these materials is attested by the fact that over 500 leading cases from all parts of the country are cited as authority for the generalizations which he presents.

The absence of numerous forms is a relief, for on this score an indictment could be hurled at the publishers of this real estate series. One recent publication in the series was more than one-half filled with New York forms. Mr. Flapan's book does give the New York forms and naturally the nomenclature of the author reflects his experience in that state, but he draws from broad sources as is evidenced by the geographical distribution of the cases cited. Mr. Flapan's presentation is effective; through the medium of questions and brief real estate problems the information is vitalized by a seeming actuality that is never attained by a bald statement of procedural facts, while the cumbersomeness of the case system for ascertaining legal principles is avoided.

The questions and answers are of a practical nature and should really help the layman understand the legal relationships and instrumentation of real estate. The materials are designed to meet the needs of the novice and not to present an especially critical and thorough treatment of the subject. The task to which this author has addressed himself was undertaken with full knowledge of the intricate and difficult subject of real property law with all its jurisdictional differences and this task has been admirably accomplished. The book is commended to all who want to meet for the first time and in understandable paragraphs the legal principles underlying real estate transactions.

H. MORTON BODFISH

Robbins, Hayes. HUMAN RELATIONS IN RAILROADING. *New York: General Publishing Company, 1927. pp. xvi, 143. $2.*

This interestingly written little book is apparently the product of Mr. Robbins' several years' work as Assistant to the President of the Boston and Maine Railroad. This association at a time when the road was being rejuvenated afforded an ex-

cellent opportunity for experimenting with various ways of stimulating a cooperative spirit in labor relations. Out of this experience Mr. Robbins draws much sage advice.

At the outset Mr. Robbins sketches four periods in the development of labor relations on the railroads: (1) the era of individual bargaining; (2) the rise of agencies for collective bargaining; (3) the "'stand-off' era of armed truce"—recognition and practice of collective bargaining; (4) the cooperative era. This last stage is barely under way and Mr. Robbins hopes to further its recognition among the majority of railroad officials who are still in the frame of mind that makes necessary such mediation, conciliation and arbitration acts as have been on the statute books for 40 years.

To this end Mr. Robbins describes several practical experiments in winning the confidence and cooperation of railroad employees, as a substitute for the bargaining spirit. The first step is for management to realize its responsibility. Relations with employees cannot be treated in a separate compartment but permeate and condition all phases of railroad operation. A thoroughgoing investigation of points of friction and causes of discontent resulted in several paper suggestions, such as local adjustment boards, more frequent but informal contacts between higher executives and rank and file, suggestion, apprentice training and group study systems, foremen's training clubs, and an employees' magazine. The remainder of the volume describes how these suggestions were applied.

Developing new "contacts of cooperation," in place of "contacts of controversy" through grievance committees, was successfully encouraged through modification of the programs of the existing safety, fuel conservation, and freight-claim prevention committees. With the scattering of productive forces characteristic of railroads, much responsibility has to be placed in the hands of foremen. Recognizing this, a start, albeit a fumbling one at first, was made in arousing the interest and sense of obligation of these hitherto neglected officials. Similarly, but with less success, educational work of a job-training sort was begun among the men. Mr. Robbins recognized the need for broader training in industrial economics and the difficulty of avoiding propaganda.

And so on through a suggestion scheme, employees' magazines, lay-over accommodations managed by the employees themselves, insurance and pensions, and the relation of a personnel department to other managerial departments. In these later chapters the most interesting portions are those discussing the purposes of employees' magazines and the extent to which employees should share in the editing; the seriousness of the railroad pension problem from the financial point of view with various proposals for continuing pensions while keeping the costs within bounds; the functions of a personnel department which should be advisory, rather than administrative, if the responsibilities of *all* managerial officers in labor relations are to be kept alive.

Finally, Mr. Robbins pleads for further study and the gathering of more information regarding labor relations in railroading. In an appendix he suggests some topics for such studies and for the interchange of information.

In a field where much remains to be explored, this little book contributes many valuable leads, presented in a severely practical manner. It deserves to be widely read, if only as an illustration of the spirit and objectives of many alert managers.

Mr. Robbins apparently resents some of the criticism of the motives of industrial management emanating from "highly respectable quarters, academic and journalistic." Nevertheless, the reviewer ventures the belief that in the long run the loyalty and cooperation of employees cannot be induced or firmly established by whatever subtle technique unless rooted in a feeling of independence, security of the job, and square dealing. At times Mr. Robbins does not seem to give due importance to this factor.

E. W. Morehouse

Bennett, Merrill K. Farm Cost Studies in the United States. *Food Research Institute: Stanford University Press, 1928. pp. xv, 289.*

The scope of this book is broader than the title, "Farm Cost Studies," indicates to students of farm management. In addition to consideration of costs of producing individual farm products discussions are given of the other kinds of farm management investigations which have been pursued by the

Bureau of Agricultural Economics and Agricultural Experiment Stations since 1920. This is followed by a chapter in which the author suggests a program for farm management investigation, three chapters dealing with cost studies and price, and an appendix devoted to correlation analysis in farm management research.

The historical development of farm cost investigation is given in some detail in Chapter 2. In general, the statements are correct. The following, however, does not agree with my experience. "From 1917 to 1920 cost investigations were common; investigators saw in cost figures a possible if not a certain basis for price fixing, and also an argument to demonstrate that farmers were not getting too much." (p. 26) Farmers' organizations which were urging cost studies often expressed the above view, but investigators generally did not hold that view.

Several statements from an address[1] by Professor W. F. Handschin of Illinois to the farm advisers give some light on this subject.

"We have heard much during the last six months regarding the proposition of the farmer being assured, in some way or other, of his cost of production plus a profit. I shall attempt to place before you some of the fundamental economic facts in the proposition and also to point out what a price-fixing policy—for that is what this really is—means when carried to its inevitable conclusion."

Then after quoting data showing the variations in the cost of producing a bushel of corn in Illinois by farms, areas, and years Professor Handschin continued: "Without attempting to formulate the final answer to the problem, I can only leave with you my standard question with reference to the whole problem of fixing a price for any commodity based on 'The cost of production plus a profit,' namely, whose cost of production?" Other parts of this address, as well as discussions which took place in farm management conferences during this time, indicate that price fixing was not the objective in most farm cost studies.

Chapter 4 dealing with the compilation of farm cost data and Chapter 5 on variations in cost contain many valuable suggestions for analyzing statistical data. This should be of considerable value especially to those investigators who have not studied statistical methods elsewhere.

In the discussion of controllable and uncontrollable factors the author shows considerable knowledge of farm practice and good ability to reason. However, the final conclusion that uncontrollable factors predominate and that those instances are exceptional in which differences in yields and costs are unmistakably attributable to management alone, can hardly be upheld by those who have studied individual farms closely for a number of years.

The next chapter on costs and efficiency has the following statement along the same line.

"One can seldom say, without extended inquiry into the facts, that each farmer is not doing what is best for himself, or that what he does must constitute either desirable or undesirable practices for others. Unfortunately a contrary assumption has apparently prevailed." (p. 126.) This statement seems to underrate the ability of men thoroughly experienced in farming and farm management in any area to judge quickly the desirability of many practices or forms of organization on any individual farm in that area. Watch the feeding practice in the case of horses, hogs, cattle, or poultry and any one who is familiar with the composition of feeds and the requirements of different classes of livestock can quickly judge approximately the efficiency of the feeding practice. From accurate feeding records plus observation, of course, the efficiency in production can be more accurately judged. The regularity of the corn-hog cycle makes it possible to judge with considerable accuracy whether a given farm should increase or decrease its hog production at a given time. The fact that the cycle exists indicates that most hog producers change at the wrong time.

The author also expresses somewhat this same attitude later in discussing a program for investigation when he states, "No one will dispute that far too many farmers operate by instinct or tradition, and exercise little or no judgment at all." (p. 170.) Farm management workers generally, I believe, have all seen numerous examples of this. If we accept this point of view, which coincides with my own observation, the opportunities for bringing about more efficient management by analyzing the causes of inefficiency appear brighter than is indicated by the previous statement regarding uncontrollable factors.

[1] "Economic Problems of Farmers," Orange Judd Farmer, Chicago (Feb. 14, 1920).

There seems to be some misunderstanding on the part of the author as to the general usefulness of cost data from any one area. This is indicated in the statement,

> "No one will quarrel with the use of public monies in collecting and presenting information in a generalized form, such as The Agricultural Situation, The Survey of Current Business, or the Tariff Information series. But to keep elaborate cost records on 25 farms and to employ the data chiefly for suggesting changes in organization and methods on these 25 farms is a somewhat different matter, and one less easy to justify." (p. 124.)

That the records are kept chiefly to suggest changes on those farms is certainly not the view generally accepted by investigators. Practically all studies that have been made point out the larger area over which the results will apply.

In Chapters 7 and 8 the author discusses at length the ambitious program that has been started in "forecasting farm management" or what has usually appeared in publications under such titles as Systems of Farming for.....Area. The suggestion is made that it would be desirable to "go slow" with untested methods, especially since there exist promising but more modest and less expensive approaches to the farm management problem. These promising and less expensive approaches are discussed in Chapter 9, entitled "A Program for Investigation." They consist (1) of organized effort in teaching farmers how to keep simple farm accounts, and (2) the cooperative farm management service supplemented by surveys.

Both of these involve the keeping of financial records by farmers and are very much worth while. However, the author seems to be unfamiliar with the difficulty of starting a cooperative farm management service in an area unaccustomed to farm management services. The project mentioned begun by Mr. Mosher in 1925, in which more than 200 farmers are paying part of the expense of a special service, was preceded by nine years of extension work in farm management which was not paid for directly by the farmers who received the benefits of that extension service. The cost of the present service, therefore, cannot be obtained accurately by charging it with the costs beginning in 1925. Joint-costs are involved there just as much as in the case of a specific crop included in a crop rotation.

I have the highest regard for this cooperative farm management service which has been so successfully carried on in Illinois but it cannot be assumed that a system planned and carried into effect by a man of such ability and experience as Mr. Mosher, after nine years of rather intensive farm management teaching in that area, could be immediately started in another area.

In regard to working out best systems of farming, the author says in part:

> "The type of farm management investigation which involves the replanning of farms by investigators rather than by farmers does not appear to be a type of investigation suitable for general adoption, principally because it throws a heavier burden on investigators than they ought willingly to undertake; they need to know more than they can know."

Certainly this type of work should be undertaken with caution. The objections to undertaking it at all have been well answered in the following:

> "The easiest course would be to assume that our present knowledge is insufficient to enable us to make even first approximations in this field which will be more accurate than those the average farmer makes. But the way in which farmers, as well as other business men, are repeatedly overdoing first one thing and then another, indicates that even a first approximation based upon careful analyses of the meager data now available may be of considerable value in making adjustments in our agriculture less painful.
>
> "At the same time, we should not be satisfied with these first approximations. As rapidly as possible the knowledge and data essential to successive and more accurate approximations should be focused upon the problem and the early hypotheses and conclusions modified wherever necessary. In this way we may be able to lay the ground work for the development of a more complete body of "Agro-economic" knowledge which should aid future generations to utilize our farming resources more effectively."[2]

The author is no doubt justified in raising the question of expense in conducting such an inquiry by the route method in a given area. The survey method is suggested and this seems to be satisfactory. The objection to replanning farms by investigators may be overcome, in part at least, by working out the plans in a farmers' economic conference. My own recent experience in a two-day conference of this kind has convinced me of the practicability of this method of attack.

Chapters 10 to 12 give excellent discussions of cost and price relationships, price fixing and farm costs, and tariff making by cost determinations.

The book is well-worth careful study by farm management investigators who should

[2] H. R. Tolley and J. W. Tapp, "Economic Research as a Basis for Agricultural Adjustments." Paper presented at the annual meeting of the New England Research Council (October 15, 1926).

welcome any kind of criticism even though it comes from one, who like the author of this book, has not been working in our field. Criticism from the outside, in fact, has some advantages in being free from a certain bias arising from personal relationships. On the other hand, it must be recognized that the outside critic is bound to show certain limitations, which are evident in parts of this book, because of lack of experience and information.

EMIL RAUCHENSTEIN

Daggett, Stuart R. PRINCIPLES OF INLAND TRANSPORTATION. *New York: Harper & Brothers, 1928. pp. xvii, 696. $4.*

"Transport . . . in the main is the process of moving articles and people along established routes between definite termini." This statement by Professor Daggett in his preface is the key to the author's treatment of his subject. In brief, Professor Daggett presents a description of the agencies of inland transportation, their historical development, and problems arising from their operation and regulation.

Beginning with a general survey of transport facilities, the author describes historically and statistically the evolution of inland waterways, railways, highways and air transport. A consideration of the effects of improved transportation upon industrial society furnishes the background for detailing the physical movements of commodities along these routes.

The effect of such transportation movements on prices of the different commodities in different markets is a logical next step. Competition, discrimination, common carrier liability, duty of service, problem of price fixing or equality of charge, theory of rates, and rates on particular hauls are all carefully discussed. In addition the traffic relations between transportation companies, cooperation between railroad companies and the problem of terminals are considered.

Such problems naturally lead to the question of the relation of the state to the transportation problem and the next nine chapters are devoted to this subject. Professor Daggett outlines consolidation policies, traces briefly state legislation beginning with the Granger Laws, discusses the various Federal acts to regulate commerce, reviews the railroad organization in time of war and compares America's experience with that of England and France during this period. Federal railroad operation from 1918–1920 is also outlined and conditions reviewed, and a chapter is devoted to the Transportation Act of 1920.

For comparative purposes Professor Daggett includes three chapters dealing with the relations between the public and the railways in England, France, and Germany, concluding with chapters on the regulation of inland waterways and statutory control of motor carriers in this country.

The outstanding feature of the book is the prominence given to descriptive material, especially that from the standpoint of the economic geographer. Professor Daggett describes all the most important forms of transport, traces their history and discusses their major problems, both industrial and public. In view of this approach, the title may be rather misleading. A study of "principles," one might expect, would allot more space to underlying principles and less to the historical and geographical aspects. Nevertheless, for the reader who wants a thorough general survey, without fear of becoming involved in technicalities, Professor Daggett's book has distinct merit.

M. H. UMBREIT

Grimes, John Alden, and Craigue, William Horace. PRINCIPLES OF VALUATION. *New York: Prentice-Hall, Inc., 1928. pp. xvii, 274. $10.*

The purpose of this book, as given in its opening paragraph, ". . . is the development and comparison of the several mathematical principles which are adapted to the valuation of future income, and a discussion of these principles with respect to their applicability or inapplicability to commercial usage."

The authors early eliminate all phases of valuation which are not based on worth derived solely from potential earning power. The value of any property is then determined by capitalizing the expected income. Mathematical methods are developed for valuing any kind of income, such as: equal annual income, regular or irregular, increasing or decreasing, subject to tax or tax-free.

The treatment is general in character and is applicable to all types of income, the only individual factors considered being those which are "common to all types of valuation, such as the future rate of interest and the treatment of the future capital expenditures necessary to the realization of the antici-

pated income." The interrelation of the correct mathematical premises is shown and finally it is demonstrated that all formulas for valuing every type of income by every premise of valuation may be derived from a single formula.

Six mathematical premises are given and a method of valuation is developed for each premise. Of these six methods of valuation only one is developed for the first time by the authors. This is called the Sinking Fund Valuation Method With Three Rates of Interest. Under this method the investor receives a speculative rate of interest upon the capital in the speculative enterprise, the sinking fund is invested at a safe rate of interest, and the investor is paid a semi-speculative rate upon the amount in the sinking fund. The theory is that the possible diversion of the sinking fund to other purposes than the return of capital justifies the semi-speculative rate on the amount in the sinking fund. This method of valuation can be considered a contribution to the field only if the sinking fund could be so diverted without the consent of the investor.

After the statement of the six premises, with their accompanying methods of valuation, they are converted into algebraic formulas, and illustrated arithmetically. A considerable portion of the book is concerned with the derivation of these formulas and the income allocation tables to solve them arithmetically under given conditions.

Chapter V is devoted to Interest Rates, with general statements as to the effect of marketability, uncertainty, and the supply of and demand for capital in a given locality. The following chapter, entitled "The Discount for Hazard Method of Valuation," is concerned with the factors which make up the speculative rate of interest. This rate includes several items namely: a safe rate of interest, an amount sufficient for insurance against ultimate losses, and a margin of profit calculated to attract capital from safe to speculative enterprises. The valuation method presented in this chapter involves principles which express the "betting odds on the venture." Thus, if it is estimated that four out of five ventures of a comparable type will be successful, the "discount for hazard would be 20% and the 'factor of safety' would be 80%." Both chapters are amply supplemented by charts and tables.

After the mathematical precision and exactness shown in the greater part of the volume it is somewhat disappointing to find in the "Summary and Conclusions" generalities as to economic phenomena which are at least open to question. It is stated, for example, that "Interest rates and income thus have tendencies to increase or decrease simultaneously and to equalize each other in effect upon value when modifications are slow and slight." As a basis for the appraiser to estimate future conditions such a statement seems to lack exactness.

The authors have clearly made a contribution in bringing together the various aspects of the mathematical principles which are so important to precise, accurate, and scientific valuation. Beyond the establishment of these mathematical principles, whose application may be rather difficult in practice, the book has contributed very little to the literature of land valuation from the standpoint of one primarily interested in urban land economics. The merit of the work may also be its chief fault. The derivation and correct application of its formulas require an understanding of mathematics beyond that of many of the individuals who are most likely to feel the need of it.

Perhaps the work might better be called the "Mathematics of Valuation." The authors' avowed intention is "to describe as many as possible of the mathematical tools which may be employed in valuation, leaving the procurement of material with which to work to the evaluator, whose skill and judgment in the selection of material and in the use of the tools will determine the quality of his product." No attempt is made to cover the fundamental sources of the future income, its amount, or the time distribution of its receipt, which form the bases for an analytical appraisal. These are probably the most important "principles of valuation" and, to one who has these things in mind, an examination of the contents of the book results in a feeling of disappointment. After all, ultra-precise mathematical methods are of limited value unless they are based on sound judgment and skill in estimating the future income to be valued. The latter is the main consideration from the point of view of the land economist.

A. D. THEOBALD

Thorp, Willard L. ECONOMIC INSTITUTIONS. *New York: Macmillan Company, 1928. pp. 305. $1.50.*

Under a somewhat different title, Profes-

sor Thorp has given an exposition of the conventional economic textbook material. Its place on the World Today Bookshelf, for use in workers' education classes, necessarily circumscribes both the selection of material and the method of treatment. To catch and hold the interest of workers or the unspecialized reading public, such a book must be readable, and must give vital and suggestive material. Professor Thorp's book meets well the test of readableness and he freshens by restatement much that has become hackneyed.

On the whole, however, this reviewer confesses to some disappointment, in that the promise of the title was not fulfilled. The cover-phrase, "Economic Institutions," leads one to expect a different orientation to the way human beings behave in gaining a livelihood from that usually set forth. But Professor Thorp offers the orthodox concept of an institution as a "social habit of thought or action," an unreasoning way of acting which gives orderliness to our economic system. The present system, he says, has four institutions as its foundation: Machine Technique, The Price System, Private Property, Business Enterprise. These are the present institutions which work on the elementary "materials of the economic order"—natural resources, labor force, accumulated wealth, scientific knowledge—to produce goods and services satisfying human wants. In brief, the Machine Technique is Production, the Price System is Exchange, Private Property is Distribution, and Business Enterprise is the Entrepreneur; the substitution of different terminology does not change the substance of the author's analysis. Professor Thorp's institutional economics seems to consist of putting new labels on old ideas.

Professor Thorp's use of the term "institution" does not permit him to give deserved importance to the aspects of control and purpose which, to the reviewer, are essential in explaining economic activity from the institutional point of view. What economic purposes actuate men in associating together; what rules they adopt enabling their association to achieve the common purpose with the least friction and waste, and how these rules are enforced; what rules and sanctions mold the relations of associations with conflicting purposes; in short, the place of law, in both the narrow and broad senses of the term, as an instrument for ordering our various economic relations, is the gist of institutional analysis. These matters are subordinated or overlooked in Professor Thorp's volume, chiefly because he views society more as a vast machine for producing physical goods and services than as an intricate, constantly changing net-work of human relations for common and conflicting purposes ordered by man-made rules. We need an institutional economics which will reinterpret more realistically what is actually going on.

E. W. MOREHOUSE.

Crecraft, E. W. GOVERNMENT AND BUSINESS. *Yonkers, N. Y.: World Book Co., 1928. pp. xi, 500. $3.*

In "Government and Business," the author has endeavored to integrate the economic, social and political aspects of a complex subject. Several points of view are utilized in discussing the central problem, and emphasis is placed upon outlining these various avenues of approach and pointing out their complex interrelationships.

The volume is divided in four parts. Part I is introductory and sketches the general relation of government and business, the function of protection, the political activities of business, and the economic functions of government. Part II deals with government services in the fields of consumption, pricing, production, exchange, and distribution. In Part III, which the author terms "Government and Business," emphasis is placed on the relation to business of various spheres of politics, including public service, public finance, public administration, construction, representation, political parties, legislation, adjudication, and international relations. Thus business is considered as it relates to various branches of political science. The following section (Part IV) reverses this order, and under the heading "Business and Government," is treated the relation to government of various aspects of business, including transportation, communication, banking, investments, insurance, credit, marketing, brokerage, sales, advertising, engineering, the professions, labor organizations and private monopolies. A concluding section is entitled "Broader Aspects of Statecraft." Political and economic organizations are compared and their interdependence emphasized; there is a discussion of the problems of centralization, localization, and coordination, and finally, political and eco-

nomic philosophy and the economic aspects of statecraft are discussed.

A 15-page bibliography of sources used by the author is appended. It is unusually broad and exhaustive, particularly as to general treatises.

"Government and Business" is worth while in many respects. Professor Crecraft is a political scientist, but he has made a commendable and to some degree a successful attempt to produce a discussion broader than either economics or politics. Further, there is a noticeable effort to survey, outline, and compare the many points of view from which the subject might be analyzed.

In this attempt to stress the interrelations involved in several approaches is to be found both the strength and weakness of the volume. It is broad in approach and point of view; it contains a wealth of information for the general reader; and it is particularly suggestive to those specialists in economics and political science who lack in general orientation. On the other hand, the analysis is noticeably redundant and perhaps unavoidably so in view of the author's organization of his material. The treatment of the central problem from so many angles has resulted in rather tiresome duplication of general subject matter, if not of illustrative materials. Part II, for example, contains a chapter on governmental control of prices, rates and service; Part III, a chapter dealing in part with many aspects of such control, including public administration, adjudication, legislation, etc., while Part IV contains sections on transportation and communication, which, of course, are subject to public control of the type above mentioned.

A second unfortunate result has been the thinness of analytical discussion possible in a single volume essaying so large a field. Also at places the author shows what is apparently an insufficient grasp of subject matter or superficial analysis. To illustrate, in discussing the Transportation Act of 1920, the writer remarks that "the government now is not only a creditor of the railroads, but it also stands ready in its legislative, administrative and judicial policies to *assure* railroad investors a fair return on their investment" (Italics mine). This suggestion of public guarantee is misleading at best. Elsewhere the author criticizes as absurd the refusal of a state attorney-general to represent municipalities in rate cases, because of his connection with the public service commission which body, he felt, should occupy a neutral position on such disputes.

Furthermore, it is surprising that in Part IV, dealing with various businesses and aspects of business, no chapters are found on public utilities (other than transportation and communication), agriculture, mining, lumbering, or general manufacturing. This is difficult to understand when brokerage and advertising, for example, which are far less significant relatively, receive separate chapters. It is difficult to discover logical uniformity in the classification in this section; to a certain extent the classification is functional and includes chapters on sales and marketing; to some extent special problems, such as private monopolies, are considered; and finally, several chapters deal with particular businesses or groups of businesses.

JOHN D. SUMNER

Faulkner, Harold Underwood. ECONOMIC HISTORY OF THE UNITED STATES. *New York: Macmillan Co., 1928. pp. xiv, 294. $1.50.*

This volume is one of the series known as the World Today Bookshelf, a fact which explains many things about the book. The volumes in this series are designed to meet "the need for short, readable, yet scholarly books to provide both stimulus and information for adult readers." These requirements impose a rather considerable burden upon the portrayer of an accurate and comprehensive survey of the economic history of the United States.

On the whole, the author has met the tests well. The text flows smoothly and interestingly and the general treatment is well balanced, with allowances for the fact that other books in the series cover in greater detail some of the more specialized aspects of the field, such as labor problems and capitalism.

The organization of the material in some places raises questions. For example, it seems to the writer of this review that the chapter on "The End of the Frontier" might well have been synthesized with "Recent Agricultural Developments" with a resulting economy of space and at the same time an opportunity for a more thorough consideration of the interrelation of the two movements.

The book as a whole lacks extensive analysis and evaluation of events and move-

ments. Doubtless this is an unavoidable fault in so short a book designed to open up the field to the lay reader.

The book is useful, not only as an introduction to the field, but also for the purpose of reviewing familiar ground. For first use the ample and suggestive bibliographical notes will be found especially helpful.

HELEN C. MONCHOW

Hayes, H. Gordon. OUR ECONOMIC SYSTEM. *New York: Henry Holt & Co., 1928. 2 vols., pp. 545, 575. $6.*

This is another addition to the field of elementary texts which is slightly different from its predecessors, but not enough different to arouse great enthusiasm or antipathy. Its treatment is largely orthodox showing considerable influence from F. M. Taylor's *Principles of Economics*. As to arrangement, an extensive treatment of the economic evironment precedes any real theoretical discussion. Possibly a little space might have been saved by a less extensive treatment of money and banking. Distribution is placed almost at the end of the second book. Undue emphasis is given to Taylor's table of proportions.

The chief criticism would appear to be that the author does not go quite far enough when he attempts to introduce a new concept. For example, he defines the marginal producer as the one who would be the first to leave an industry because some change makes his work less profitable, or because some other line offers greater gains. Thus are included not merely the least efficient, but possibly some who may be highly efficient. When he comes to land, he defines as marginal the land which yields barely enough to pay for its utilization. Again Professor Hayes suggests that in view of modern developments the term money ought to include credit currency, and then drops the matter with the decision to stick to the narrower definition.

On the other hand, the book is generally satisfactory to teach, and seems to be understandable to the students. It does not attempt to make professional economists of them but does call attention to the applications of the principles involved. The problems and exercises at the end of each chapter are above the average of such aids, and can be made quite helpful.

L. R. GUILD

Wildman, John R., and Powell, Weldon. CAPITAL STOCK WITHOUT PAR VALUE. *Chicago: A. W. Shaw Co., 1928. pp. iv, 553. $5.*

The first legal authorization for no-par stock was given in 1912 by the state of New York. The use of no-par stock was considered a novelty at that time but gradually the public, financial houses, and accountants began to recognize the advantages as well as the disadvantages of no-par stock.

At present, the capital structure of many companies includes a no-par preferred stock and a no-par common stock with, perhaps, several classes of common. The corporation laws of a number of states have been enlarged to accommodate the newer financial instrument. One of the most recent states to accept no-par stock is Wisconsin. In characteristic fashion Wisconsin has taken the lead in safeguarding the economic side as well as the legal side of no-par stock. In Wisconsin, the full amount received for the no-par shares must be capitalized and may not be diminished by the payment of dividends. An exception is made when the directors, before the sale of the no-par stock, pass a resolution that part of the purchase price is in payment for accumulated surplus which is available for dividends.

In the present work, the authors analyze the use of no-par stock from an accounting and economic point of view and with sufficient legal background to give authority to their interpretation. In fact, pertinent excerpts are made from the laws of the various states which recognize no-par stock. One of the problems which arises with no-par stock is the separation of capital, capital surplus and surplus. The problem becomes more difficult when additional shares are sold, or are issued as a stock dividend, and when a cash dividend is paid.

Reorganization, mergers and consolidations are a source of no-par stock because this stock is adapted to their needs. But once more the problem of capital, surplus, and deficit arises. Changing from par value to no-par value requires consideration of fundamental economic and accounting principles.

The book is written in a clear style and much detail is given. The effort has been to trace the effect of no-par stock upon the many situations which arise in connection with the stock corporation. A good bibliography is included.

E. O. MALOTT

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Editorial Note: Response to the special bibliography published in the last issue of the *Journal* prompts us to offer another and to announce that, where feasible, special bibliographies of similar character will hereafter displace the Current Literature Notices originally presented.

*This bibliography is practically complete to March 1, 1929 It is recognized that material dealing with the economics of large-scale production and diversified investment in these fields apply, but for this material the source of such references alone is given.

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For additional material or to keep up to date on this subject see:

1. *Industrial Arts Index:* Holding Companies; Electric Plants—Interconnection; Electric Plants (central station)—Costs, Statistics; Electric Utilities—Finance, Management, Regulation, Securities.
   (See also, appropriate titles for other utilities).
2. *Public Affairs Information Service:* Holding Companies; Electric Power.
3. *Accountants Index:* Holding Company—Accounting.
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